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ABSTRACT

The book is intended to provide an overview of the needs of blind and physically handicapped individuals who are unable to use print resources and to describe practices designed to meet those needs. An initial section reviews the history of library services to this population, noting federal legislation and agencies which serve them. A detailed history of the National Library Service for the Blind and Physically Handicapped is included. Part 2 includes papers on users (results of questionnaires, interviews, and site visits), materials and publishers (including braille, large type materials, and music services); reading aids and devices; state programs from the perspective of a state librarian; and the National Library Service Network. Part 3 presents four papers on the following topics: school library media services, public libraries (services for the blind and physically handicapped); academic library services (facility accessibility, financial considerations); and training and research in librarianship. The final section shifts to an international orientation; the papers in this section focus on developments in library services for blind and physically handicapped persons in other countries and international cooperation. (CL)

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That All May Read

Library Service for Blind and Physically Handicapped People

***National Library Service
for the Blind and
Physically Handicapped***

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Preface

Provision of library service to blind and physically handicapped individuals is an ever-developing art/science requiring a knowledge of individual needs, a mastery of information science processes and techniques, and an awareness of the plethora of available print and nonprint resources.

This book is intended to bring together a composite overview of the needs of individuals unable to use print resources and to describe current and historic practices designed to meet these needs. The completed work provides students, practicing professionals, and others interested in the field a solid base from which they may refine their thinking, modify appropriate techniques, and develop more appropriate transfer mechanisms.

Behind every publication of this type is an army of workers who contribute to the myriad of professional, technical, and clerical requirements. It is never possible to identify all those who assisted; however, as always, it is necessary to thank those who played a crucial role. Therefore, especial appreciation is directed to:

Dr. Elizabeth W. Stone, Dean of the School of Library and Information Science, at the Catholic University of America;

Mary Jack Wintle, Assistant Director of the National Library Sevice for the Blind and Physically Handicapped (NLS), who served as general coordinator of the project;

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Marjorie Neumann, the technical editor. Anyone who has attempted a project such as this is aware of the significance of competent professional, technical editing.

I am pleased with this book. I am sure that, following a reading, you will also be pleased—and will keep it ever ready for consultation.

Frank Kurt Cylke
Director
National Library Service for the
Blind and Physically Handicapped
Library of Congress

August, 1982

Part One

History and Standards

Eunice Lovejoy

Fifty-three years after the signing of the Declaration of Independence, this country's first public effort was made in training and educating blind persons. In 1829 the Massachusetts legislature passed the enabling legislation for the New England Asylum for the Blind, later to become the Perkins School for the Blind, at Watertown, Massachusetts.[1] The New York Institution for the Blind was founded two years later. In 1832 both schools were opened and the education of blind children also began in Philadelphia. By the end of the nineteenth century, all but a few states had established such schools.[2]

Every school for the blind had a collection of books in some form of tactile print. The director of the Perkins School, Dr. Samuel Gridley Howe, devised an angular modification of roman letters in upper and lower case, which was known as Boston Line Type. The Acts of the Apostles was produced in 1835, followed by the Old and New Testaments. The textbooks produced at Perkins were used in many other schools for the blind. The Pennsylvania Institution for the Instruction of the Blind at Overbrook in Philadelphia developed a similar form of type and is credited with producing the first embossed book in America, the Gospel of Mark.

Dr. Simon Pollak, one of the founders of the Missouri School for the Blind, started using Louis Braille's system of six-dot cells in his school soon after the official adoption of braille in Paris in 1854. By the early 1880s, its use had spread from Missouri to most of the schools for the blind, and the Howe Memorial Press in Boston, a Perkins School affiliate, was producing textbooks in a form known as American braille.

In 1868, William B. Wait, superintendent of the New York Institution for the Blind, introduced New York Point, another dot code. This was adopted by the American Printing House for the Blind, in Louis-

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ville, Kentucky, which became the official printer for school books in the United States in 1879, when Congress passed the Act to Promote the Education of the Blind.

A form of type which was more acceptable to people who had lost their sight as adults was Moon type, a simplified version of roman capital letters first produced in England in 1847 and introduced in the United States in 1880. Older people, whose touch is often less sensitive, found its large, bold letters easier to read.[3]

Library Service to Blind Adults

After students left school, they continued to need reading materials, and many schools made their libraries available to nonstudents in their localities. A few even presented books to students when they left school. Yet the demand for reading material was not satisfied, and librarians in public libraries began to respond to the requests for books.[4]

H. M. Utley, librarian of the Detroit Public Library, spoke about books for blind readers at the twentieth general meeting of the American Library Association (ALA), held at Lakewood-on-Chautauqua, New York, in July 1898. He said that the different forms of type made it difficult for a library to choose a system to satisfy all its users. In 1896, he reported, his library purchased sixty-six volumes printed in braille and friends donated forty-four volumes in Boston or Philadelphia type. Circulation increased temporarily, but, even though the collection was well publicized, only seventy-seven books circulated in 1897 because readers had read everything of interest to them. Utley suggested that the solution might be for one library to supply books to all the readers in a state or in a large section of it.[5]

His audience must have included a number of concerned librarians because a report in the April 1904 issue of *Public Libraries* showed at least eighteen public libraries in large cities were serving blind readers in the beginning of the twentieth century.[6] Like the Boston Public Library, which became the first library for the blind after it received a gift of eight embossed books in 1868, libraries in other cities acquired gift books from blind readers, friends, schools, or publishers. Few were able to purchase additional titles. The Free Library of Philadelphia took over the book-circulating function of the Philadelphia Home Teaching Society and Free Circulating Library for the Blind in 1899. The New York Free Circulating Library for the Blind opened in 1896, and its 1,649-volume collection and 492 pieces of music became part of the New York Public Library in 1903. A large room was assigned to the collection, and staff previously responsible for it continued their home teaching and delivery of books to readers who were unable to go to the library. A state library for the blind population was authorized by the New York Regents of the University in 1896, and a plan was established for coordinating services for all libraries for blind people in the state and for reaching all potential readers.

When the new Library of Congress building was opened in October 1897, a special reading room for blind people was established. Embossed books and music were circulated, and readers were asked to name the books and the style of printing they preferred. One hour of oral readings each day, a weekly recital, art gallery visits, garden parties, dramatic entertainments, river excursions, and teas were part of The Library's program.

The Trader sisters, Georgia and Florence, raised money and organized the Cincinnati Library Society for the Blind in 1901; the public library prepared the books for circulation and provided an area for readings and entertainment. In San Francisco, a ladies' auxiliary was organized in 1902 to establish a reading room for blind persons in the public library. There books were circulated, adults were taught to read, write, and type, and each morning the newspaper was read aloud for an hour.

The American Library Association: A Forum for Concern

Emma R. Neisser, from the Free Library of Philadelphia, presented a paper on books for blind readers at the annual meeting of the American Library Association held in Narragansett Pier, Rhode Island, in 1906.[7] The following year the Committee on Library Work with the Blind made its first report at the ALA annual meeting, held at Asheville, North Carolina. The postal laws had been amended in 1904 to permit the free mailing of books for blind individuals, alleviating a financial problem that libraries faced when readers from other cities requested books. As a result, the State Library Commission of Maryland agreed to pay the Enoch Pratt Free Library of Baltimore fifteen cents for each book circulated. The New York Public Library was circulating books freely in New York, New Jersey, and Connecticut. In Virginia the state library often sent books beyond state borders, while the Missouri School for the Blind at Saint Louis and the Indiana State Library circulated books to residents within their respective states.[8] In 1907 Asa Don Dickinson, a member of the ALA Committee on Library Work with the Blind, articulated the increased concern of librarians about the inadequacy of materials when he wrote: "We should have a central library, where can be found in one place all the books that have ever been printed in raised type. Any one of these books should be available to every blind person in the country. . . . Under the present system (or want of system), each district has either no books at all, or an insufficient collection which has largely outlived its usefulness *in the immediate neighborhood.*"[9]

The committee was also concerned that librarians were involved in nonlibrary types of activities, such as teaching blind people to read and write and providing social activities for them. Since other groups within communities were assuming responsibility for meeting some of the needs of blind adults, the committee recommended that the ALA appoint a committee "to report on the progress of work for the blind strictly germane to libraries and to confer with such societies as shall foster the general interests of the blind."[10]

In succeeding reports, the ALA Committee on Library Work with the Blind continually expressed concern over the multiplicity of types in which books were published. Existing libraries grew and new centers were added, but some librarians felt more were needed. The lack of uniform statistics was seen as a problem. New publications, both embossed and in print, were listed each year. In 1914, the committee reported that library schools (the New York State Library School, the New York Public Library School, the Pratt Institute, the Syracuse Library School, and Simmons College) devoted one or two lecture hours each year to the service and that students visited nearby schools and libraries for blind people.[11]

In 1915, the ALA published the first handbook for library services for blind individuals, *Library Work with the Blind*. Mary Chamberlain, from the New York State Library, introduced her guide by stating, "Now, when the whole world is taking so keen an interest in the welfare and education of the blind, it is hard to realize that twenty-five years ago practically no formal provision had been made for their reading outside of the small collection of books in the schools or 'asylums for the blind' as they were often called."[12] She advised librarians to select most books in the type which was taught at schools for the blind in the state; to become familiar with different embossed type systems; to seek out readers through personal inquiry and visitations; to cooperate closely with schools, state commissions charged with the welfare of the blind population, and local associations organized for social purposes; and to instruct new readers in the use of the library. In addition, Chamberlain gave suggestions for classifying materials and circulating and shelving books.[13]

The long drawn out "battle of the types" ended in this country in June 1918. Readers, even more than librarians, were frustrated by the multiplicity of type systems. The first organized complaint came from a group of blind people and others concerned about educational opportunities who met in Saint Louis in 1895. Ten years later this group became the American Association of Workers for the Blind and appointed the first Uniform Type Committee, which included representatives of libraries, printing presses, and home teaching societies. After years of investigation and attempts to work out a compromise, the committee recommended the use of a grade 1½ braille, which utilized some of the contractions of the British grade 2 system. Both the American Association of Workers for the Blind and the American Association of Instructors of the Blind approved this recommendation.[14] While this decision promised a solution in the future, it meant that—for the time being—librarians had to add one more form of type to their collections. Lucille Goldthwaite, librarian for blind individuals at the New York Public Library, pointed out that many "disgruntled" readers who were dependent on type which would no longer be produced "dropped from the [borrowers] lists forever, constituting a sort of 'lost battalion' in the battle of the types."[15]

In the First World War, the United States had a relatively "small number of blinded casualties. . . . The commonly accepted estimate was 450."[16] At the 1920 annual conference of the ALA, at Colorado

Springs, Lt. Frank Schoble spoke for himself and other blinded veterans: "A blind soldier can be trained to read, but of how much greater value that training would be if sufficient desirable books were available. He will want books to read when he gets out of the service because, in many cases, he has come in contact with books for the first time in his life."[17]

American Foundation for the Blind, an Ally

In 1924 the ALA's Committee on Work with the Blind reported the benefits of working with the American Foundation for the Blind (AFB), which was created just three years earlier by joint action of the American Association of Workers for the Blind and the American Association of Instructors of the Blind. Through the efforts of the foundation, Congress appropriated money to the Veterans Bureau for the publication of braille books for blinded veterans. The foundation also agreed to include the "Booklist of Revised Braille," published for several years by the ALA, in its *Outlook for the Blind.*

In 1924 the committee also reminded librarians of their responsibility to protect eyesight and recommended that every library display an ALA-published list of books printed in type somewhat larger than average, *Books for Tired Eyes,* compiled by the Minneapolis Public Library.[18]

At the urging of the committee, the AFB made a study of library work for blind people in the United States and Canada during 1928 and 1929. Robert B. Irwin, executive director of the AFB, reported his preliminary findings at the 1929 annual meeting of the ALA. In his report, he noted that sixty to eighty libraries had collections of embossed books, which were expensive, clumsy, and occupied much space. The blind population the libraries served was usually small, and the books were usually relegated to a back room when they had been read and were no longer in demand. And, because of apparent lack of interest, new titles were not purchased. But, in 1904, when Congress allowed books for blind people to be mailed free of charge, patrons began applying for these books by mail. Irwin stated:

> A few progressive libraries placed attendants in charge of these collections. These attendants encouraged the mail order business and gradually built up a large clientele

> spread in many instances over several states. This process went on until today we have about fifteen libraries which have one or more attendants giving full time to this work. Libraries having no regular attendant to promote this activity were unable to handle satisfactorily the mail requests, and in time practically discontinued all library work for the blind. Today more than ninety percent of the books lent by libraries for the blind are called for by mail or telephone, and practically all are sent out through the postoffice.[19]

Creation of a National Service

As a result of this study, the AFB with its advisory committee from the ALA recommended that the federal government should supply free books for blind persons to a selected list of geographically well-distributed libraries. Ruth Pratt, congresswoman from New York, and Reed Smoot, senator from Utah, introduced identical bills into the House and Senate authorizing an annual appropriation of $75,000 to the Library of Congress for books for blind adults, to be distributed by regional centers. At the same time Congressman Crail of California introduced a bill which would provide $100,000 annually to be appropriated to the Braille Institute of America for the purchase of braille books to be distributed to regional libraries in proportion to the number of blind readers they served. The Braille Institute was a new nonprofit organization created by Robert Atkinson, owner of the Universal Braille Press, in Los Angeles.[20] Representative Lister Hill of Alabama introduced a third bill, calling for $100,000 to be expended for the same purpose under the direction of the ALA.[21] Helen Keller was one of the prominent people who appeared before the House Committee on the Library in support of the Pratt bill. With the appropriation raised to $100,000, it passed the House on February 28, 1931—the Senate had passed the Smoot bill in January—and was signed into law by President Hoover on March 3, 1931.

On July 1, 1931, the Books for the Adult Blind Project began operation and the Library of Congress placed an experimental order for fifteen braille titles from four presses which had submitted proposals: the American Printing House for the Blind, the Universal Braille Press, the American Brotherhood of Free Reading for the Blind, at Los Angeles, and the Clovernook Printing House for the Blind, at Cincinnati, Ohio. After consultation with the ALA and the

AFB, nineteen libraries, including the Library of Congress, were designated regional distribution centers.[22]

Reflecting on the new law, Howard Haycraft, president of the H. W. Wilson Company, said, "While it may be said that enactment of the appropriation marks a turning point in library work with the blind, the new status is evidenced not so much by any startling change in methods as by quiet expansion along established lines and increased efficiency and usefulness of existing organization and equipment."[23] Lucille A. Goldthwaite applauded the move to centralization, pointing out that scattered collections made books less attainable, because readers soon read everything in the small local collection. She felt there was still a role for the general librarian to help "by acquiring accurate information by locating blind readers, and by imparting the information to them."[24]

Two important events altered the tide of library service in 1932. A conference of representatives from America and England met in London and adopted the common form of braille now used in all English-speaking countries. And the AFB established a laboratory for the development of "talking books"; the following year it produced a long-playing, unbreakable disc and a machine on which it could be played. In addition, postal laws were amended in 1934 to allow the free mailing of talking books and in 1935 Congress increased its annual appropriation to the Library of Congress national program for blind adults from $100,000 to $175,000, with $75,000 to be used for sound-reproduction records.[25]

Problems of an Expanding Service

With the many changes in the service, guidelines were needed. The second edition of Mary Chamberlain's short *Library Work with the Blind* was published in 1930, but it did not satisfy the need for a handbook describing the duties of the librarian for blind readers. Martha Stark, branch librarian of the Wolfner Memorial Library for the Blind, in Saint Louis, developed a plan for such a book when she was chairman of the ALA's Committee on Library Work with the Blind in the mid-1930s. Her successor, Carol Alderson, senior librarian of the Blind Section, California State Library, at Sacramento, received the approval of the committee to survey the twenty-seven libraries receiving material through the Library of Congress, as well as six other large libraries, including the Canadian Institute for the Blind. Sample forms were requested and this information was to be compiled by the committee in the form of a handbook.[26] At the ALA meeting in Milwaukee in 1942, the committee reported that the manuscript had finally been completed and sent to the ALA Editorial Committee for approval for publication. The Executive Board accepted it. However, the annual conference for 1943 was canceled because of war conditions, and the committee report to the ALA regretfully announced that the Editorial Committee found it necessary to abandon the project of publishing the handbook.[27]

Talking books, the machines on which to play them, and braille books were provided by the Library of Congress, but the burden of operational support fell on the regional libraries. Alison B. Alessios, retired librarian, Library for the Blind, New York Public Library, wrote of some of the frustrations experienced by librarians eighteen years after the national service was established. First of all, she wrote, advising the Library of Congress on book selection was difficult for librarians isolated from print books. Furthermore, libraries were in inaccessible, often hazardous locations and were inadequate and crowded, discouraging readers from visiting them. Librarians had to perform much routine work, such as keeping records of books sent to readers and checking the condition of talking books as they were returned. In addition, financial support from both states and cities was inadequate. The collection provided by the Library of Congress had to be augmented by volunteer-produced materials in braille or recorded form, the latter done on the Soundscriber. And finally, she noted, use of Library of Congress materials was restricted to adults, even though blind children also needed books.[28]

In 1951, the Library of Congress held the first of its continuing national conferences, bringing together 111 representatives of the groups which provided reading materials for blind readers. Although it could not solve all the problems that had arisen due to the rapid expansion of library service for blind individuals since the federal program began twenty years earlier, "the conference was effective in that it developed and directed attention to the areas in which efforts for improvement should first be concentrated."[29] On July 5, 1952, one problem was solved when the law which made blind children eligible for service from the Library of Congress became effective.

Librarians were not alone in their concern over the inadequate financing of regional libraries and the twin burdens of storage and distribution of books. In 1955, M. Robert Barnett, executive director of the AFB, declared: "This is a grave problem and unless some decisive steps are taken on a national basis soon, the entire program for providing reading matter for blind persons may become so riddled with inefficiency and low quality service that even service to small numbers of the total potential of readers will be badly interrupted." Accordingly, the AFB undertook a study "to assess the administrative and professional effectiveness of the special library facilities and programs established to serve blind individuals." Four activities were planned: a survey of the existing twenty-eight regional libraries, a survey of the more than fifty agencies responsible for the distribution and maintenance of talking-book machines, a survey of the needs of blind persons for library service, and the development of standards to "measure and advance the professional level of library services for blind persons."[30]

Francis R. St. John, chief librarian of the Brooklyn Public Library, directed the first two surveys and prepared a comprehensive report. His recommendations covered financing, organization, staffing, physical conditions, records, book selection, communication, machine repair, technical problems, publicity for the program, and the Library of Congress publications which informed readers of new books, *Talking Book Topics* and *Braille Book Review*. St. John concluded that there was "a demonstrated need for a set of basic standards for library service for the blind."[31]

Recognizing the urgent need to improve a critical situation, the Library of Congress Division for the Blind and the ALA Round Table on Library Service to the Blind, a successor to the Committee on Library Work with the Blind, jointly developed a minimal set of standards for regional libraries. This five-page publication was distributed in 1961.[32]

That same year, the AFB conducted the third part of its study of library services, a survey of blind readers. It was found that most readers were satisfied with the work done by their regional libraries. Only 15 percent reported any difficulties in using the mail service, while 25 percent suggested that the service could be improved by making more books available, simplifying the procedures for ordering them, and improving the condition of the books.[33]

The Development of Standards

During the 1940s and 1950s there had been a ground swell of concern about the accountability of voluntary health and welfare agencies. A Rockefeller Foundation–sponsored study concluded, in what was popularly called the Hamlin Report after the study's director, that citizens needed more information about the groups they were asked to support. On the advice of a committee appointed to recommend what action should be taken concerning work with blind people, the AFB created an autonomous Commission on Standards and Accreditation of Services for the Blind (COMSTAC). In February 1964, technical study committees, with seven to fourteen members each, were appointed to develop standards for twelve areas of service.[34]

Ralph Shaw, dean of library activities at the University of Hawaii, was the chairman of the committee of nationally known experts which developed library standards. An early draft of the report of this committee was mailed to 400 librarians, heads of educational institutions, and interested individuals. Successive drafts were reviewed by the various divisions of the ALA—the Library Administration Division, the Adult Services Division, the American Association of School Librarians, the Association of Hospital and Institution Libraries, and the Public Library Association. On July 14, 1966, the Library Administration Division of the ALA officially adopted the final draft of the standards in the name of the ALA. Upon completion of the standards, the AFB had concluded its four-part study.

One of the basic principles underlying the standards was that "responsibility for blind and visually handicapped readers does not stop at the federal and state levels. Since blindness knows no geographical barriers, any community, school, college, business, profession or other group may be the setting in which a blind person functions."[35] Accordingly, the standards delineated the responsibilities of the federal level of service, state and regional libraries, community libraries, school libraries, and libraries of agencies serving blind and visually handicapped persons. Additionally there were standards for equipment and physical facilities and an appendix suggesting staffing patterns for state and regional libraries. Eric Moon, editor of the *Library Journal,* hailed the standards as "a bold document which, if it finds sufficient enthusiastic support at all levels, can do much to remove another group from the ranks of the 'underprivileged' library users."[36]

Library Services for Other Handicapped People

At the same time that library services were being developed for blind people, they were also being developed for people with other disabilities. World War I had brought an awareness of the library needs of sick and physically disabled persons. The Department of War had asked the ALA to establish libraries in base hospitals where disabled veterans in this country were being treated. In some cases the aid of the local public library was enlisted. Librarians who had served hospitals overseas came home to establish libraries in hospitals in their own communities.[37]

While the ALA Committee on Libraries in Institutions for Dependents, Defectives and Delinquents, which was organized in 1915, included a "chief of library work in hospitals,"[38] hospital librarians became more visible as a separate round table in 1919.[39] In 1944 the Division of Hospital Libraries was created, and in 1956 it merged with the Institutions Division to form the Association of Hospital and Institution Libraries. This organization brought together librarians who were serving handicapped people in hospitals, special schools, nursing homes, and other institutions, as well as in their own homes.

The first organized program of home delivery to shut-ins had been reported by the public library in Springfield, Massachusetts, in 1901,[40] but it was the Cleveland Public Library's service, planned by Clara Lucioli, which provided a model for similar services in America and abroad.[41] A study of programs for homebound handicapped individuals, prepared for the U.S. Congress in 1955, reported that "many of the large public libraries in cities have extension departments which serve persons in hospitals, special schools, other institutions, and the homebound. Some of this activity is carried on through either deposits of library materials in the institutions themselves or the regularly scheduled visits of bookmobiles. Talking books for the blind and machines which project books on the ceiling for the bedridden are available from some libraries.''[42]

At the annual meeting of the ALA, held in Washington, D.C., in 1959, the Adult Services Division and the Office for Adult Education cosponsored an Institute on Library Service to an Aging Population. Meeting every morning at eight o'clock, it attracted nearly three hundred librarians and trustees. ''Helping Readers Who Present Special Problems'' was the topic of one session in which methods for serving the visually and physically handicapped were presented. Special equipment for bedridden and blind individuals was displayed, and the Association of Hospital and Institution Libraries distributed copies of a list of reading aids for handicapped people, which was compiled by a subcommittee of the Audio-Visual Committee of the ALA.[43] Because of continued demand, the Association of Hospital and Institution Libraries updated and expanded the list five times during the next nine years.

Both the April 1961 and the October 1964 issues of *ALA Bulletin* were devoted to hospital and institution library services, sensitizing the entire library profession to the needs of and opportunities for serving people in special settings. The Children's Services Division of the ALA showed its concern for handicapped children when it created a Committee on Library Service to Exceptional Children in 1964. This growing awareness of the library needs of disabled and institutionalized persons was reflected in federal legislation passed two years later.

Tide-turning and More Growth

In its second session, the Eighty-ninth Congress passed two bills which immeasurably aided libraries in meeting the needs of people with disabilities. On July 19, 1966, President Johnson signed Public Law 89–511, the Library Services and Construction Act (LSCA) Amendments of 1966, which authorized funds under Title IV–B to assist state library agencies in establishing or improving services to physically handicapped persons (including those blind or visually handicapped) certified by competent authority as unable to read or use conventional printed materials as a result of physical limitations. Under Title IV–A of the act, funds were provided for library services to state institutions, including those serving handicapped people.[44]

On July 30, 1966, President Johnson signed a second bill, Public Law 89–522, which amended the Pratt-Smoot Act so that physically and visually impaired people who could not use normal printed materials were eligible to borrow recorded books and playback equipment under the Library of Congress program for blind readers. Some of the impetus for passing this legislation, which had first been introduced several years before, undoubtedly came from the World War II, Korea, and Vietnam veterans who had survived their battlefield injuries because of modern technology and miracle drugs. Speaking at the hearings on several bills with the same intent, Dr. L. Quincy Mumford, the Librarian of Congress, testified that in addition to an estimated 400,000 blind people eligible for the service, there were 600,000 nearly blind persons, 4,700 persons who had lost both arms or the use of them, 8,000 without fingers and toes, 1,600 in iron lungs or other respiratory devices, and 750,000 suffering from cerebral palsy, multiple sclerosis, muscular dystrophy, Parkinson's disease, and other crippling ailments.[45]

Truly, 1966 was the dawn of a new age in library services for blind and physically handicapped people. At the time there were thirty-two regional libraries for blind readers. The Library of Congress Division for the Blind and Physically Handicapped, as it was renamed to fit its new responsibilities, immediately started planning for the establishment of new regional libraries to serve the larger readership. It set about systematically strengthening its collections, increasing the number of copies of titles, and reexamining and revising its procedures to accommodate the anticipated rapid expansion.[46] For the first time, it actually promoted the service. Within five years, fourteen additional regional libraries were opened.

Under the regulations for the administration of LSCA funds, each state library agency had to develop a state plan with the help of a representative advisory committee. Some states, like California and Pennsylvania, conducted statewide surveys of library services for blind and physically handicapped readers which they used as a basis for a comprehensive plan.[47] Federal funds had to be matched with state or local funds, and the literature for the next decade reflects the variety of services initiated with the assistance of federal money or stimulated by a well-publicized project. By 1971 Eleanor Brown was able to compile twenty-six pages of library services for physically handicapped people in *Library Service to the Disadvantaged.*[48] More recently such programs have found a place in two editions of the U.S. Office of Education publication *Library Programs Worth Knowing About.*[49]

In many states, LSCA money was used to improve the quality of service in the regional libraries; in some it was used to create regional libraries. In Kansas, it was used to set up subregional libraries to serve Kansas readers formerly served by the Wolfner Memorial Library in Saint Louis. Projects designed to inform eligible readers about services included the thirty-minute film *That All May Read* produced by the Delaware State Library for showing throughout the state. A "talking bookmobile," outfitted with materials for the handicapped, toured Arizona. The New York Public Library produced spot announcements and played them on local radio stations. It became a common practice to involve public libraries in demonstrating talking books; these libraries frequently had small collections and talking-book machines.[50]

Large-print books for adults, first produced in England in 1964 by Ulverscroft, reached the American market in 1965, the same year that Keith Jennison offered for sale the first commercial American books in large type. LSCA funds enabled libraries to purchase collections of these, as well as recorded and braille materials. The New York Public Library conducted a demonstration project to test the need for, interest in, and use of large-print materials.[51] The R.R. Bowker Company's 1970 edition of *Large Type Books in Print* listed 1,200 titles and included a directory of publishers from whom they could be obtained. The fourth edition, published in 1980, contains over 4,000 titles supplied by more than sixty-five publishers.

Many libraries used federal funds to initiate services to homebound people and individuals in hospitals and nursing homes.[52] *The Librarian and the Patient* points out the arrangements made between local libraries and institutions and the resources which became available to patients with the expansion of the federal laws.[53] The freedom to use both talking books and large-print materials with visually and physically impaired readers enhanced the development of this service. While in the past only physicians were permitted to certify readers' eligibility, now this could be done by librarians and other professionals.

In 1965 the Public Library of Cincinnati and Hamilton County, Ohio, was chosen by the ALA's Committee on Library Services to Exceptional Children as the site for a two-year program to demonstrate library services to exceptional children. LSCA money funded demonstration services and the production of a 16-mm color film entitled *Reaching Out,* which described the program.[54]

Training institutes like the 1969 institute on library service for the noninstitutionalized handicapped at the University of Michigan School of Library Science, funded under Title II–B of the Higher Education Act of 1965, and statewide workshops funded under Title IV of the LSCA added impetus to the movement to serve handicapped people. So did the work of Margaret Hannigan, LSCA coordinator, Title IV, Division of Library Programs in the U.S. Office of Education. In 1970, Title IV was absorbed into an older Title I of the act.

Beginning in the early 1970s, when the Kansas and Illinois regional libraries placed collections of materials in local public libraries and arranged for them to serve all the readers in a specific geographical area, the Library of Congress encouraged the development of subregional libraries.[55] This trend toward decentralization was consistent with the provision of the Rehabilitation Act of 1973 which specified that recipients of federal funds must take care not to isolate or concentrate handicapped persons in settings away from nonhandicapped program participants.[56] That act and the Education for All Handicapped Children Act, which Congress passed in 1975, reflected the increased concern on the part of handicapped people and their families that they should not be treated as second-class citizens.

Need for New Standards

In the late 1960s and early 1970s, members of the ALA Round Table on Library Service to the Blind, at the urging of the ALA headquarters staff, started to consider restructuring their interest group. By charter, the Round Table was restricted to library service for blind readers. However, the national program had been extended to physically handicapped people in 1966. In 1974, the Round Table joined with the Association of Hospital and Institution Libraries Division of the ALA to form the new Health and Rehabilitative Library Services Division (HRLSD). The Library Service to the Blind and Physically Handicapped Section was established within this division.[57]

One of the first official actions taken by the membership of the new section was to declare obsolete the standards for library service adopted by the Library Administration Division of the ALA in 1966.[58] The 1966 standards emphasized centralized services, while the current trend was toward decentralization and provision of service at the local level. Furthermore, the standards were too limited in scope, applying only to library service for people who were blind or visually handicapped not those with physical disabilities. At their 1976 midwinter meeting, the Executive Committee of the Library Service to the Blind and Physically Handicapped Section recommended that the HRLSD Board be asked to accept leadership in creating ALA standards for libraries for blind and physically handicapped readers.[59]

The standards which were developed by the Committee to Review Standards for Library Service to the Blind and Physically Handicapped addressed the library services provided by the Library of Congress and the regional and subregional libraries within the national network. The eight-person committee, headed by Katherine Prescott, retired head of the Cleveland regional library for the blind and physically handicapped, began work in July 1977. In March 1978 it distributed a preliminary draft of standards to elicit the reactions of users, librarians, professionals in allied disciplines, and volunteers. A public meeting, focusing on this draft, was held at the ALA conference in June 1978. The following September, the committee met to rewrite the standards, which were mailed to Library Service to the Blind and

Physically Handicapped Section members for a mail vote of approval. The final draft was approved on January 7, 1979, by the Association of Specialized and Cooperative Library Agencies (ASCLA), which represented a merger of the HRLSD with the Association of State Library Agencies in 1978.[60]

At the annual meeting of the ALA in 1978, the president of the ASCLA called a meeting of librarians representing different types of libraries to start planning for the development of guidelines for service to blind and physically handicapped readers in state libraries, public libraries, elementary and secondary school libraries, academic libraries, special libraries, and libraries in institutions, hospitals, and nursing homes. The association is continuing to explore ways of accomplishing this task.

The useful life of the 1979 standards probably will be even shorter than that of the 1966 standards. Anticipating the impact of radio reading services, automated circulation systems, and electronic reading aids, the committee which developed the network standards recommended that new standards be formulated within five years.[61] ASCLA has appointed an ad hoc committee which is reviewing these standards and will make recommendations for their revision.

In the fall of 1980, the National Library Service for the Blind and Physically Handicapped, as the Library of Congress program is now called, contracted with the Battelle Columbus Laboratories in Columbus, Ohio, to develop and implement a method for evaluating the National Library Service and network libraries against the standards. An advisory group which includes consumer, network, and ALA representatives is an important part of this two-year project.

Support of Other Groups

The role of the producers of materials, both the larger sources—like the American Printing House for the Blind, Clovernook Printing House, and Recording for the Blind with its network of volunteer groups throughout the United States—and the small local groups of volunteers, should be acknowledged. Without their support there would be no library service for blind and physically handicapped readers. In addition to producing the materials, the American Printing

House has maintained a union catalog of volunteer-produced books and instructional materials for the school-aged reader.[62]

Volunteers have contributed to the service, from the late 1800s, when, singly or in groups, they were organizing libraries for blind people, until the present, when they are involved in every facet of the service. The Telephone Pioneers of America, an organization of current and retired telephone employees, has repaired and adjusted talking-book machines and cassette players since 1960. In some communities members have also delivered and demonstrated machines to new readers.

Support has come from other federal agencies besides the Library of Congress. In July 1970, Congress created a National Commission on Libraries and Information Science, an independent agency responsible for advising the president and the Congress on the implementation of a national policy for meeting the library and information needs of the people of the United States. In a document which provides the framework for a national program, the commission recognized that more than six million blind and physically handicapped people in the country need materials in special formats. While it commended the Library of Congress for its work, it also recommended that more effort be made to seek out and serve persons who are eligible for service, that the limited resources available be utilized more effectively, that the quantity and quality of materials be increased, and that attention be directed "toward the continued increase in the number of appropriate circulation outlets, so that handicapped persons may be served more adequately by their local libraries."[63]

Four years after the appointment of the national commission, the Ninety-third Congress passed a joint resolution authorizing the president to call a White House Conference on Libraries and Information Services "to develop recommendations for the further improvement of the Nation's libraries and information centers and their use by the public."[64] To the national commission was delegated responsibility for giving technical assistance to states and territories, enabling them to organize and conduct meetings of citizens from all walks of life to focus on ideas for improving library and information services.

Between September 15, 1977, and July 20, 1979, fifty-eight preconferences were held in the states, the territories, and the District of

Columbia and among the American Indians. Recommendations for improved library services to handicapped people were made at fifty-three of these meetings.[65] In November 1979 more than 650 delegates from all parts of the country attended the White House Conference on Library and Information Services, held in Washington, D.C. They approved several resolutions specifically concerned with disabled persons and incorporated recommendations for service to this group into others concerning topics such as public awareness and training, research, and development. In mid-September 1980, an ad hoc "Committee of 118," consisting of two delegates from each of the states and territories, the District of Columbia, federal libraries, and Native Americans, met in Minneapolis, Minnesota, to develop a plan to implement the White House Conference resolutions. Meanwhile, groups within many of the states are mustering support for recommendations which must be carried out at the state and local level.

The history of library service to blind and physically handicapped readers has been a story of many people working together. Among these, the most important have been the readers. There is evidence of this from the time young Louis Braille devised a workable code for translating the written word into a form he could read, until as recently as today when a current reader calls his library to protest receiving a book he has not requested.

The history reflects not only the growing recognition that blind and physically handicapped people have the same interests, intellectual capacity, and ambitions as other members of society but also the determination that they enjoy the same benefits.

And the history reflects a constant tension among a need, the structure for filling that need, and the financial support for the structure. The structure at the present moment tends to be returning to a decentralized system of service, with looser controls from the federal level. This can succeed only if the quality of service to readers is maintained and adequate financial support is given at the local level.

NOTES

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Federal Legislation and Agencies Which Serve Blind and Physically Handicapped People

Irvin P. Schloss

During the past forty-five years, a considerable body of federal legislation has been enacted in the human services area. The programs established by congressional action range from income maintenance for individuals, administered directly by the federal government, to federal financial grants to state and local governments for a variety of purposes, such as health care, treatment for handicapped children, education, employment and training services, and vocational rehabilitation of the disabled.

Some are designed for special groups relatively small in number; others are virtually universal or cover large segments of the population. Some have very specific federal requirements for compliance; others allow broad authority to states and localities in carrying out a program as long as basic general requirements are met. Whatever the type of federally assisted program, for nearly half a century the pattern in the United States has been to establish major federally assisted programs to deal with special needs.

How effective are these programs in achieving their objectives? This is a question raised by congressional committees when considering legislation to extend programs due to expire. In recent years, it has been raised at more frequent intervals as congressional committees increasingly exercise oversight of programs within their legislative jurisdiction. Representatives of the administration and of advocate organizations appear before these committees and attempt to answer this question within the limitations of the statistical measuring systems available to them.

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Periodically, an administration becomes concerned with the proliferation of federally assisted human services programs and seeks authority from the Congress to combine several—the allied services concept—or to give states and localities broader latitude in administering the program by allocating federal funds for broad purposes—special revenue sharing. Perhaps the broadest approach to federal financial aid to state and local governments became law when the Congress enacted the State and Local Fiscal Assistance Act of 1972—general revenue sharing—through which the federal government annually gave states and units of local government some $6 billion in the aggregate for a period of five years. This act was extended in 1976 for an additional three years and nine months at an annual rate of some $6.7 billion.

Late in 1980, the Congress extended general revenue sharing to units of local government for three years and to states for two years. The allocations to local governments will be nearly $4.6 billion for each of three years through fiscal year 1983 and to state governments $3.3 billion for each of two years beginning October 1, 1981. The new law repeals the provision of the act authorizing states to use their share of revenue-sharing allocations for matching fund purposes to receive federal funds for various categorical programs. Instead, it gives states the option of receiving their share of revenue-sharing allocations *or* the federal share of categorical programs.

The Congress enacted the Congressional Budget and Impoundment Control Act of 1974 as a means of achieving two major objectives. First, the Congress established its own budgeting procedures with revenue and spending ceilings and timetables for enactment of appropriations bills. Second, it established procedures requiring the president to seek formal congressional action on appropriated amounts he intended to defer spending or not to spend at all. Previously, the president could avoid spending money for any program despite congressional wishes expressed in an appropriation act. Both aspects of this law have important implications.

With specific regard to blind and physically handicapped people, the impact of federally created and assisted programs is great from both a positive and negative viewpoint. On the one hand, many of the federally created programs, particularly those involving income maintenance and health services for older persons, are especially helpful to the largest segment of potential users of the talking-book program. On the other hand, the special programs designed for younger people with limited or no sight are not routinely available to older persons with the same vision problems. Ironically, older blind and severely visually impaired people—by far the largest segment of that population—remain the most neglected in many federally assisted programs.

Despite substantial improvements in the basic income maintenance programs, the Older Americans Act of 1965, the Rehabilitation Act of 1973, and some of the other social service programs, the trend toward more fiscal constraint has dramatically altered federal financing of special programs for handicapped persons. A major factor in reducing financing of specific programs to assist handicapped persons is the Congressional Budget and Impoundment Control Act of 1974. Under its provisions, the Congress must determine its spending priorities in conjunction with projected revenues for each fiscal year, and its priorities may not encompass the special needs of the handicapped. A downturn in the economy and allocation of substantially greater federal financial resources for unemployment compensation, a protracted high inflation rate, sharply increased living costs, a proliferation of federal financial assistance programs, general and special revenue-sharing approaches which foster competition between various population groups for the same dollar—all of these may affect funding.

Similarly, an administration's spending priorities may not cover the needs advocate organizations see as essential for special population groups of the handicapped. In a complex international and national economy, many factors may dictate other priorities for national resources.

Before discussing major existing programs and their impact, it is desirable to review statistics on the blind and physically handicapped population currently eligible for the program administered by the National Library Service for the Blind and Physically Handicapped of the Library of Congress.

With the exception of the blind and severely visually impaired, statistical data on potentially eligible disability groups are inadequate. For example, the National Center for Health Statistics (NCHS) of the

U.S. Public Health Service estimates that 176,000 individuals have cerebral palsy.[1] However, NCHS itself does not differentiate the number of individuals with this disability who cannot handle printed material and need recorded books.

Consequently, the statistical information which follows reflects the more reliable estimates of the blind and severely visually impaired population who are unable to read printed material.

The Severely Visually Impaired Population

Blindness and severe visual impairment are conditions whose handicapping effects vary with the individual, depending on the degree of remaining useful sight; the person's ability to use residual sight effectively and efficiently in the performance of various tasks; the presence of other impairments, such as loss of hearing or loss of tactual sensitivity; and age. It has been estimated that up to 90 percent of all information is received by humans through sight. With loss of sight, humans must rely principally on the sense of hearing and the sense of touch.[2]

The aging process frequently results in some loss of hearing in the high-frequency range—the range useful for orientation and mobility for blind persons. Younger individuals blinded in explosions, such as servicemen blinded in combat or civilians subjected to bombing or shelling, often lose high-frequency hearing from nerve damage as well. Noise pollution in modern urban centers is accelerating hearing impairment at an earlier age in persons who may later suffer serious vision loss, as well as in younger blind persons who would otherwise not incur the same degree of hearing loss until later in life.

The principal problems resulting from blindness are loss of mobility, inability to read print, unemployability, and inability to perform other daily living activities.

The National Society for the Prevention of Blindness (NSPB) estimated in 1978 that some 498,000 persons in the United States were legally blind. The definition of blindness used in arriving at this estimate is the same as that used in section 216(i) (1) of the Social Security Act, that is, central visual acuity of 20/200 or less in the better eye with correcting glasses, or a contraction in the field of vision to 20 degrees or less in the better eye if central visual acuity is better than 20/200. The prevalence rate of legal blindness is 2.25 per 1,000 of population. The NSPB estimates that 75 percent of the legally blind population are forty years of age or older. It also estimates that some 45,000 Americans become legally blind each year and that 75 percent of this number are forty or older.[3]

Based on its 1977 household interviews, NCHS estimates that some 1.391 million noninstitutionalized individuals in the United States have severe visual impairment. The definition of severe visual impairment used in reaching this estimate was inability to read ordinary newspaper print with the aid of correcting glasses. The prevalence rate is 7 per 1,000. NCHS estimates that 142,000 of these individuals are under age forty-five (prevalence rate, 1 per 1,000), that 259,000 are between the ages of forty-five and sixty-five (prevalence rate 6 per 1,000), and that 990,000 are sixty-five and older (prevalence rate of 44 per 1,000).[4]

Based on a 1969 survey of 816,000 nursing home patients, NCHS found that 36,086 were blind.[5] We have no authoritative estimates of the number of blind or severely visually impaired individuals in other types of institutional settings, such as homes for the aged.

The leading causes of blindness in the United States—senile cataracts, diabetic retinopathy, glaucoma, and macular degeneration—are conditions which principally affect people over forty. In addition, blindness is sometimes caused by cardiovascular diseases, such as arteriosclerosis, hypertension, and stroke, as well as other conditions which frequently accompany the aging process. Since, in the light of current scientific knowledge, the prevalence of blindness in the United States is a function of population growth, we can expect that the number of older blind persons will increase as the number of older persons in the population increases.

Based on its 1971 household interviews, when the estimated population of severely visually impaired individuals was 1.306 million, NCHS indicated that 503,000 were male, and 803,000 female. For the age group under forty-five, approximately 69,000 were male, and 51,000 female. Of those between the ages of forty-five and sixty-four, it was estimated that 119,000 were male, and 157,000 female. For the group sixty-five and older, 314,000 were male, and 595,000 female.[6]

The final NCHS report of the characteristics of severely visually impaired persons based on its 1977 survey showed that this population continues to have low income. Given the age configuration of the legally blind population and Social Security Administration statistics, it is likely that 75 percent of this total population are beneficiaries of income security programs—old age and survivor's insurance, disability insurance, and supplemental security income for the aged, blind, and disabled.

Despite these figures, no one knows the exact number of totally blind individuals in the United States. Authorities associated with rehabilitation centers for the blind and other agencies providing direct services to blind persons estimate that between 12 and 18 percent of the legally blind population have no useful vision. Therefore, it can be assumed that a maximum of ninety thousand persons in the United States are totally blind or have only light perception without light projection, that is, without the ability to identify the direction from which light is coming. The rest have various degrees of residual sight, which may be useful to them in the performance of different tasks, especially if the usefulness is enhanced by optical aids, training in various techniques, and other aids and devices.

Income Security

Old Age, Survivors, and Disability Insurance

The basic income security program for most Americans is the Old Age, Survivors, and Disability Insurance (OASDI) program (administered by the Social Security Administration) under Title II of the Social Security Act. Originally enacted in 1935 at the height of the Great Depression, this title of the act provides for a uniform, national old-age pension program financed through equal contributions by both employees and employers of a percentage of the employees' wages. It has been subsequently expanded since 1935 to cover survivors of wage-earners, the self-employed, and individuals so disabled by a physical or mental impairment for at least twelve months that they are unable "to engage in any substantial gainful activity."

The need for higher income taxes to finance World War II and postwar international and defense obligations resulted in a substantial delay in implementing projected increases in the Social Security tax rate and taxable wage base (the portion of wages to which the Social Security tax applies). At the same time, wage levels, living standards, and living costs substantially increased. As a result, despite periodic increases in benefit levels by the Congress, persons retiring in the 1950s or 1960s who were wholly or largely dependent on Social Security retirement, found that income increasingly inadequate to meet basic needs. The high inflation rates of the 1970s exacerbated their problem.

In 1972, the Congress moved to provide relief by enacting a 20 percent increase in Social Security benefit levels. Effective in 1975, it provided for automatic adjustments in benefit levels effective in July of each year in accordance with increases in living costs reflected in the Consumer Price Index (CPI) and for increases in the taxable wage base effective in January of each year.

The Social Security Amendments of 1977 altered the financing of the program and the method of computing cash benefits, Congress's intention being to assure the integrity of the Social Security system into the twenty-first century. Substantial increases in the taxable wage base to $25,900 in 1980 and $29,700 in 1981 have resulted in concern among upper middle income Americans, whose contributions to the system will be substantially higher. (In 1977, the taxable wage base was $16,500.)

For a worker retiring at age sixty-five in 1982, the *maximum* Social Security benefit was $729.00 monthly for payments beginning in July. For the retired worker and spouse aged sixty-five, the maximum monthly benefit was $1,093.00 beginning in July. The *average* monthly benefits were respectively $406.00 and $695.00.

A worker may retire on actuarially reduced benefits at age sixty-two, and the retired worker's spouse is entitled to actuarially reduced cash benefits at age sixty-two. The exception to the minimum retirement age of sixty-two for spouse's benefits is the situation where a retired worker has a younger spouse and dependent children under eighteen (or twenty-two if the dependent children are in school). However, in this case the benefit is predicated on the presence of dependent children rather than on marital status, so the exception is only apparent, not real. The family would retain only the retired worker's benefit after dependent children reached eighteen (or twenty-two if they are in school) and would not regain an additional benefit until the spouse reached age sixty-five (or sixty-two with reduced benefits).

The Social Security Amendments of 1972 liberalized widows' cash benefits to make them equivalent, if applied for at age sixty-five, to the benefit amount the deceased worker would have been entitled to receive. A widow may receive actuarially reduced benefits beginning at age sixty. A disabled widow with children under eighteen (or twenty-two if they are in school) in her care may receive cash benefits at any age. Disabled widows, widowers, and surviving divorced wives, who must be unable to engage in *any* gainful activity because of their disability in order to qualify, may begin receiving actuarially reduced cash benefits at age fifty. A worker who is fifty-five and blind may qualify for disability insurance cash benefits if he is unable "by reason of such blindness to engage in substantial gainful activity requiring skills or abilities comparable to those of any gainful activity in which he has previously engaged with some regularity and over a substantial period of time."

Retired workers aged sixty-five and older may supplement their income by earning up to $6,000 in 1982 before their Social Security is reduced. After earnings in that amount are reached, benefits are reduced by one dollar for every two dollars of earnings. The earnings ceiling, which is called the retirement test, is now automatically adjusted annually in accordance with increases in living costs and wage rates. It should be noted that *unearned* income in any amount, such as income from investments or other retirement plans, will not reduce Social Security benefits. Also, a retired worker aged seventy-two may have earnings in any amount without having benefits reduced.

The major disability insurance provisions of the Social Security Act were designed to assure a degree of income protection for workers who have serious long-term disabilities which prevent them from engaging "in any substantial gainful activity." The provisions have been periodically liberalized over the years, including the requirement that a disability must be expected to last for at least twelve months. After a five-month waiting period, a qualified disabled worker may receive cash benefits based on his wage record as if he had reached age sixty-two and was retired. Disability insurance cash benefits cease at age sixty-five and become regular Social Security retirement benefits paid from a different trust fund.

A legally blind worker, regardless of age, who is fully insured for Social Security purposes and who is unable "to engage in any substantial gainful activity" may qualify for disability insurance cash benefits. An individual with a serious visual impairment who is not legally blind but who is found to be unable "to engage in any substantial gainful activity" because of that visual impairment must not only be fully insured but must also have twenty out of the forty quarters preceding the onset of the disability in employment covered by Social Security.

"Substantial gainful activity" for disability insurance purposes for other than blind persons is defined in regulations of the Secretary of Health and Human Services as earnings in excess of $300 a month. Proposed regulations not yet made final would equate the dollar amount of the definition to that in the retirement test previously mentioned and automatically increase it when the dollar amount in the retirement test is increased.

The Social Security Amendments of 1977 statutorily equated "substantial gainful activity" for blind persons to the retirement test. Thus, in 1982 a blind disability insurance beneficiary could earn $500.00 a month without losing cash benefits. However, earnings in excess of that amount would result in termination of cash benefits after a twelve-month trial work period.

The Social Security Disability Amendments of 1980 extended the twelve-month trial work period to twenty-four months, with suspension rather than termination of cash benefits during the second twelve months. These 1980 amendments also added a number of provisions designed to create incentive for disability insurance beneficiaries to seek gainful employment and leave the benefit rolls. These provisions include extension of medicare coverage for an additional thirty-six months after an individual is terminated from the disability cash benefit rolls as a result of engaging in "substantial gainful activity," elimination of a second twenty-four month waiting period for reentitlement to medicare, and deduction of impairment-related work expenses from earnings in determining whether an individual is engaged in "substantial gainful activity." These amendments added two provisions affecting the size of benefits. One reduced the number of dropout years permitted disabled workers under age forty-seven in computing their cash benefit, thereby reducing the benefit. The other placed a ceiling on family benefits of disabled workers, the effect of which is to reduce or eliminate these benefits for dependent children.

Another income security program under Title II of the Social Security Act can be important to those individuals who become disabled from loss of sight before age twenty-two and who cannot work long enough to build up a wage record for benefits under the two major programs. This program authorizes the payment of "disabled child's benefits" for life when the parent on whose wages the child is dependent dies, retires, or becomes disabled. Thus, these benefit payments could begin when the disabled dependent "child" is as old as forty and could continue until the disabled "child" dies.

The Social Security system has developed some anomalies and problems. The intent of this social insurance program is to protect workers and their families against the loss of part of their earnings resulting from retirement, death, or disability. It was deliberately designed to replace a larger proportion of the earnings of low earners. However, the congressionally enacted formula for automatic increases had the unintentional result of benefit payments to some individuals being higher than their earnings during their working years. The Social Security Amendments of 1977 corrected this anomaly.

There is a short-term financing problem in the Social Security trust funds which will become acute in the 1980s if not corrected. It is likely that the Congress will take appropriate action.

Supplemental Security Income

The Social Security Amendments of 1972 established Supplemental Security Income (SSI) for the Aged, Blind, and Disabled administered by the Social Security Administration under Title XVI of the Social Security Act. The SSI program became effective in January 1974 and supplanted the federal-state welfare program under Title I (old age assistance), Title X (aid to the blind), Title XIV (aid to the permanently and totally disabled), and Title XVI (aid to the aged, blind, and disabled) of the Social Security Act for eligible individuals in the fifty states and the District of Columbia.

This new, federalized program established a uniform, national income security program for needy individuals which many view as more positive, less demeaning, less impoverishing, and generally more liberal than the fifty-one programs it supplanted. Under the old programs, not only was there considerable variation in payments to recipients from state to state, but there was also considerable variation in benefit amounts paid to the three categories of recipients within each state.

There are substantial numbers of blind and severely visually impaired persons in the aged and disabled categories. Virtually all of these were transferred to the SSI rolls from state rolls.

Under the SSI program an eligible individual could receive up to $284.30 a month and an eligible couple up to $426.40 a month as of July 1982. For SSI purposes, "an eligible couple" is one where both spouses are sixty-five or older, legally blind, disabled, or any combination of these three criteria. Except for blind people, the definition of disability for SSI is the same as that for disability insurance, that is, "inability to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to last for a continuous period of not less than 12 months." The definition of "substantial gainful activity" is also the same as previously discussed. For persons on the SSI blind rolls, the "substantial gainful activity" criterion does not apply.

To qualify for SSI payments, an individual who is severely visually impaired but not legally blind and who meets income and resources criteria would have to be sixty-five or older or found to be disabled.

There is a provision for a number of income disregards. For example, $20 a month of income from any source may be disregarded, thus making persons receiving low Social Security benefits eligible for some SSI payments. In addition, the first $65 a month of earnings plus half of monthly earnings over that amount may be disregarded for SSI purposes, thus enabling those recipients who are capable of working and finding employment to augment their total income. For those on the blind rolls, work-related expenses, such as income taxes, transportation costs to and from work, and the like, may also be disregarded for SSI purposes. The Social Security Disability Amendments of 1980 added a provision allowing impairment-related work expenses to be disregarded in computing cash benefits for individuals on SSI disabled rolls.

Amendments enacted in 1976 provide for the disregard of assistive housing payments under the various housing laws, as well as the total value of an SSI recipient's house. Also, there will no longer be a reduction in SSI payments for beneficiaries residing in group homes which house up to sixteen persons.

Pension Reform and Income Tax

Increasingly, private pension plans are becoming a major source of retirement income for many workers in addition to Social Security. To protect these workers from loss of private pension income at retirement owing to business failures, company mergers, or the worker's changing jobs, the Congress enacted the Employee Retirement Income Security Act of 1974 (commonly referred to as the Pension Reform Act of 1974). Its provisions for the "vesting" in workers of their right to pension income, as well as "portability" of their pension rights, are particularly important features. Some of its provisions are administered by the Department of the Treasury; others by the Department of Labor.

The Internal Revenue Code has a number of features designed to foster provision for retirement pensions as well as to benefit persons who are blind or sixty-five and older.

One of these features permits persons who are employees of private nonprofit organizations classified as tax exempt and described in section 501(c)(3) of the Internal Revenue Code to defer payment of federal income tax on that portion of gross income paid into a private pension plan until retirement, when total income and special exemptions may make the tax rate more advantageous. Another provision, commonly called the Keogh Plan, permits self-employed persons to defer payment of federal income tax on 15 percent of gross income, up to a maximum of $15,000 annually, if those funds are invested in a retirement plan. Similarly, any employee may defer payment of income tax until actual retirement on up to 100 percent of his gross earned income, up to $2,000 annually, placed in an Individual Retirement Account (IRA).

There is an additional $1,000 exemption on federal income tax for a taxpayer who is blind or who is supporting a blind spouse. Also, there is an additional exemption of $1,000 for a taxpayer who is sixty-five or older or is supporting a dependent who is sixty-five or older. Thus, a blind taxpayer aged sixty-five who is supporting a spouse also aged sixty-five may claim a total of five exemptions of $1,000 each in computing federal income tax.

Other features of the Internal Revenue Code are advantageous for individuals who are sixty-five or older. These include the retirement tax credit as well as benefits related to the sale of a house.

Health Care

Medicare

The major improvements in federally financed health care came in 1965, when the Congress added Title XVIII (medicare) and Title XIX (medicaid) to the Social Security Act.

Under Title XVIII, persons who are sixty-five and older and entitled to receive Social Security cash benefits are eligible for hospitalization, nursing home care, and home health services as well as surgery, other medical services, various ancillary health services, prosthetic aids and appliances, other special devices, and inpatient prescription drugs. Services may be provided on an inpatient, outpatient, physician's office, or home health basis under a variety of conditions and restrictions. There are limits to the number of days of hospitalization, nursing home care, and home health services. There are also deductibles and coinsurance amounts, which the patient must pay for various services. Mental health services are severely restricted.

For supplementary medical insurance benefits (the part of medicare which functions like major medical private health insurance), the patient pays a monthly premium, which is deducted from Social Security benefit checks. Patients may be reimbursed for up to 80 percent of authorized expenses after a deductible for supplementary medical insurance benefits.

Disability insurance beneficiaries may now qualify for medicare after they are on the disability insurance rolls for two years.

From the point of view of blind individuals, there are a number of shortcomings in the medicare program. Although eye surgery and clear-cut medical treatment for serious eye conditions are covered, only cataract lenses and ptosis rods (for weak eyelid muscles) are covered. Low-vision services, including prescribed low-vision lenses; routine eye care; and eyeglasses to correct special or ordinary vision problems are not covered. Orientation and mobility services, rehabilitation teaching services, and other services designed to restore a patient to maximum functional independence after loss of sight are not covered. Similar basic rehabilitation services, such as physical therapy or speech therapy, are covered for persons with other disabling conditions. For example, a stroke victim who loses full use of limbs and has slurred speech is covered for the services of a physical therapist and speech therapist. However, if blinded by the stroke, he or she is not entitled to therapeutic services which would permit functioning more independently without sight.

Medicare does not cover prescription drugs outside of a hospital or nursing home and it requires three days of hospitalization before a patient can be covered for nursing home care. In addition, increasing health care costs result in increasing costs of supplementary medical insurance benefit premiums, deductibles, and coinsurance payments for the patient, making it highly desirable for those eligible for medicare to be able to afford, and to be accepted for, private health insurance to cover these costs.

Although medicare is administered by the Health Care Financing Administration, it contracts with intermediaries, such as Blue Cross–Blue Shield affiliates or profit-making insurance companies, for the day-to-day handling of claims by providers of health care services. There often seems to be variation in interpretation of covered services by intermediaries in different parts of the country.

Medicaid

Title XIX (medicaid) of the Social Security Act authorizes a federal-state matching fund program to provide health care services to recipients of SSI, aid to families with dependent children, and other welfare programs, as well as to those not receiving cash assistance payments but found to have low enough incomes to be called medically indigent. A Social Security beneficiary may be entitled to both medicare and medicaid and may select nonduplicative benefits more advantageous under either.

Under medicaid, the federal government gives each state which meets certain state plan requirements between 50 percent and 83 percent of the cost of providing health care services to its eligible residents. At the federal level, the program is administered by the Health Care Financing Administration in the Department of Health and Human Services (HHS). At the state level, the program is administered by state or local welfare or social services agencies. The program varies from state to state; and, in addition to the range of health care services available under medicare, it may include services in intermediate care facilities, low-vision services, and provision of outpatient prescription drugs.

Generally, SSI recipients are entitled to medicaid. A law enacted by the Ninety-fourth Congress immediately before adjournment assures individuals who lose entitlement to any SSI payments by virtue of cost-of-living increases in regular Social Security of continued entitlement to medicaid. This is particularly important to residents of states where medicaid benefits, such as general coverage of prescription drugs, are more advantageous than benefits available under medicare.

The Omnibus Budget Reconciliation Act of 1981 contains an amendment to Title XIX which holds promise of providing significant services to blind and other handicapped persons. The amendment provides authority to the states to develop medicaid-reimbursed home and community-based services for medicaid-eligible persons who, but for the provision of such services, would require care in a skilled nursing facility or intermediate care facility. The new provision authorizes the secretary of Health and Human Services to waive federal requirements to enable a state to cover personal care services and other services pursuant to an individual plan of care to persons who would otherwise require institutionalization. States must determine that individuals otherwise would need institutional care and that it is reasonable to provide individuals with alternative services, available at their choice, pursuant to a plan of care.

Veterans Health Programs

The Veterans Administration (VA) operates a large network of hospitals, outpatient clinics, and domiciliaries. It also reimburses state nursing homes and homes for the aged for part of the cost of treating or housing veterans. Drugs prescribed by VA or private physicians for eligible veterans are available free from VA pharmacies on a mail-order basis.

Veterans seeking treatment for a service-connected condition have the highest priority. Veterans with a service-connected condition seeking treatment for a nonservice-connected condition have the next highest priority. Veterans without service-connected conditions seeking treatment for nonservice-connected conditions are eligible for inpatient services on a "space available" basis and for other services on a generous financial-need basis. In recent years, dependents of veterans with permanent and total service-connected disabilities were made eligible for coverage of health care services by private providers and can use VA facilities only when those facilities have a unique capability.

Following World War II, when the army closed its rehabilitation center for blinded servicemen and women, the VA established the Central Blind Rehabilitation Center at the VA Hospital, Hines, Illinois, for blinded servicemen and women and veterans of all branches of the Armed Forces. Subsequently, the VA established similar centers at its hospitals in Palo Alto, California, and West Haven, Connecticut. A fourth is projected at the VA Hospital, Birmingham, Alabama.

Like the army, the VA considers restoration of a blinded veteran to maximum functional independence a health service after it has been established that medical, surgical, and optometric services to restore maximum useful sight have been completed. Rehabilitation centers for nonveteran blind persons, which were also established after World War II as residential or nonresidential facilities generally based on the army and VA example, are operated by local voluntary agencies serving blind persons, by state agencies for the blind, or by state vocational rehabilitation agencies.

In addition to veterans with service-connected blindness, the VA's blind rehabilitation centers serve veterans with nonservice-connected blindness on a space-available basis.

Low-vision service is also increasingly available in VA facilities. In addition, because of the increasing age of the World War I, World War II, and Korean Conflict veteran population, the VA's Department of Medicine and Surgery is focusing more attention on geriatric problems generally.

Maternal and Child Health

The Maternal and Child Health and Crippled Children's Programs under Title V of the Social Security Act are designed to reduce infant death and to correct or ameliorate handicapping conditions in children. Administered by the Health Services Administration of the United States Public Health Service, both programs authorize formula grants to states—the first to state health agencies and the second to state crippled children agencies—on a fifty-fifty matching basis. Thus, states received one dollar of federal money for every dollar of state money appropriated for these two programs.

In addition, project grants to these same state agencies are authorized by the law for specific purposes in contrast to ongoing services under the formula grant programs. Research and training of personnel are also authorized by the law.

Although the focus of both of these programs is to improve maternal and child health and crippled children services in rural and low-income areas, the needs criteria are more liberal, since these programs can cover expensive procedures such as open-heart surgery. The Maternal and Child Health Program is intended to cover mothers during the perinatal period and preschool children, while the Crippled Children's Program covers children under age twenty-one. Vision screening is covered in many states under these programs, but specialized services to legally blind or severely visually impaired children are not covered everywhere. The Omnibus Budget Reconciliation Act of 1981 established a maternal and child health block grant, combining the maternal and child health and the crippled children's program formula grants to states, the SSI disabled children's program, and various smaller health programs, funded in Fiscal Year 1982 at $348 million, $106 million less than in Fiscal Year 1981.

National Health Insurance

Several Congresses in recent years have held extensive hearings on proposed national health insurance legislation but failed to approve any. In 1974 and 1975, the American Foundation for the Blind and others recommended inclusion in a national health insurance program of provisions for special services to blind and severely visually handicapped persons. Typically, these special provisions would: (1) cover low-vision services to enable blind and severely visually impaired individuals to make maximum use of residual vision; (2) cover services in a rehabilitation facility for the blind; (3) cover services of a mobility specialist for the blind and a rehabilitation teacher of the blind to blind persons in hospitals, extended care facilities, homes for the aged, and their own homes on an inpatient, outpatient, and home health service basis to assist them in achieving maximum functional independence without sight; and (4) authorize periodic comprehensive audiological examinations for all blind and severely visually impaired individuals.

Food and Nutrition

The various federally financed food and nutrition programs can be a valuable supplement to the income of blind and other handicapped persons. The Nutrition for the Elderly program under the Older Americans Act of 1965 provides for low-cost nutritious meals served to persons sixty years of age or older and their spouses, preferably in congregate settings. However, meals may be delivered to the home of the recipient. Individuals may pay nominal sums at their own option for these meals. This program is administered at the federal level by the Administration on Aging in HHS as a formula grant program to the states, with a 90 percent federal share in the Fiscal Year 1980 and 85 percent federal share in the Fiscal Year 1981.

The Food Stamp Act of 1964 authorizes a program administered by the food and nutrition service of the Department of Agriculture at the federal level and through state and local welfare agencies. On the basis of income, eligible households may purchase varying amounts of food stamps, which can then be used as legal tender for the purchase of food in participating local stores. Elderly or handicapped persons may use food stamps to purchase meals delivered to their homes by nonprofit organizations if they are unable to prepare meals themselves. Elderly persons may also use food stamps to pay for meals served in congregate facilities.

In 1979, Public Law 96–58 liberalized the Food Stamp Program for handicapped persons. First, it authorized a deduction for medical expenses in excess of $35 a month for households containing individuals sixty years of age and older or SSI or disability insurance beneficiaries in addition to the standard deduction and dependent care deductions. Second, it allows an excess shelter expenses deduction for households containing individuals in these same categories if their shelter costs exceed 50 percent of household income after other permissible deductions. Third, it makes eligible for food stamps blind or disabled individuals who are receiving SSI or disability insurance benefits and who live in public or private nonprofit group living arrangements which serve no more than sixteen residents.

It is likely that both of these programs are underutilized by eligible blind or disabled individuals for a variety of reasons, including pride, ignorance of their existence, inability to get to places where meals are served or food stamps are distributed, and bureaucratic red tape in the distribution of food stamps.

Housing

The various federal housing laws have programs, including rent supplementation and other assistive housing payments, designed to assist low-income families or those with elderly or disabled family members. They are administered at the federal level by the Department of Housing and Urban Development. For the rent supplement program, low-income individuals and households may receive rent subsidies in excess of 30 percent of their monthly income up to a maximum of 70 percent of the rent payment.

In some areas, local housing authorities with federal financial assistance are purchasing luxury and other apartment houses for occupancy by low-income older persons. In addition, there is a specific program of low-interest loans to foster construction of housing for the elderly and handicapped.

Rehabilitation Services

The Vocational Rehabilitation Acts and their successor, the Rehabilitation Act of 1973, have as their principal purpose restoration of handicapped individuals to employment. Preparation for, and placement in, jobs with pay commensurate with the handicapped individual's aptitude and ability have far-reaching implications for his or her old age, since earnings during the working years govern income in retirement. Among the major improvements made by the Rehabilitation Act of 1973 was the clear mandate of a priority in services to the severely handicapped.

This program uses federal-state matching funds, with a federal share of 80 percent of the cost of case services. It is administered at the federal level by the Rehabilitation Services Administration (RSA) in the Department of Education and operated by state vocational rehabilitation agencies or state agencies for the blind.

Since physical restoration to eliminate or ameliorate a handicapping condition is an integral part of the program, it also covers health services which cannot be obtained under other existing programs, including private health insurance.

Low-vision services can be provided to maximize the efficient use of residual sight. Similarly, state agencies can provide rehabilitation center training, as well as orientation and mobility and other daily living skill services outside of a center.

The Rehabilitation Act of 1973, which was approved by the president early in the autumn of that year, contained authorization for special projects in the rehabilitation of older blind persons.

Under Titles II and XVI of the Social Security Act, disability insurance beneficiaries and SSI blind and disabled beneficiaries under sixty-five considered suitable candidates for vocational rehabilitation are referred to state rehabilitation agencies, with the full cost of services covered by the federal government. Referral from both programs is very selective, and congressional intent is clearly vocational rehabilitation for employment to remove beneficiaries from the rolls in both income security programs.

Historically, research and demonstration project funds under the vocational rehabilitation program have been used to develop programs which benefit blind and severely visually impaired persons of all ages. Examples are establishment and operation of low-vision clinics, services for deaf-blind adults, training of orientation and mobility specialists, and rehabilitation center services specifically for older blind persons.

Public Law 95–602, the Rehabilitation, Comprehensive Services, and Developmental Disabilities Amendments of 1978, made many far-reaching improvements in the Rehabilitation Act of 1973. In what is now Title VII of that act, the 1978 amendments established a formula grant program to assist the states in providing comprehensive rehabilitation services to handicapped individuals to enable them to achieve independent living in their homes and communities regardless of their potential for vocational rehabilitation and employment. In addition, the 1978 amendments authorized the commissioner of the Rehabilitation Services Administration (RSA) to make grants to states and private nonprofit agencies in an amount not to exceed 10 percent of the allotments to each state under the formula grant program for independent living rehabilitation services for older blind persons (defined as persons fifty-five years of age and older)—a group seriously neglected in the regular vocational rehabilitation program. The third major component of Title VII authorized discretionary grants for the establishment and operation of centers for independent living, a new concept in the rehabilitation movement through which centers operated by severely handicapped persons attempt to assure other handicapped individuals of access to a wide variety of services. It should be noted that the only Title VII program to receive financing through the appropriations process for the fiscal year ending September 30, 1982, was the centers for independent living program.

Title VI of the Rehabilitation Act of 1973, also added by the 1978 amendments, grouped the authorizations for two new employment programs for handicapped individuals with an existing, successful one—projects with industry. In the latter the RSA makes grants to and contracts directly with corporations for on-the-job training of handicapped persons, a program which invariably results in jobs at the conclusion of the training period. One of the two new programs established a community service employment pilot program for handicapped individuals, employment in public service jobs which enable those participating to work for pay in useful jobs until they have an opportunity to obtain permanent employment with private agencies or companies or with government agencies. The other new Title VI program is designed to assist handicapped individuals to establish their own businesses and to assist them in marketing their products. Neither of these two new programs has received appropriations for the 1982 fiscal year and have not, therefore, been implemented. The community service employment program is to be administered at the national level by the Department of Labor, while the business enterprise program will involve the RSA in consultation with the Department of Commerce and the Department of Labor.

A major new government entity established by the 1978 amendments is the National Institute of Handicapped Research, statutorily housed under the same assistant secretary as the RSA. Designed to be the focal point in the federal government for technological, vocational, and social research related to the special needs of the handicapped, the institute assumes the major function in research previously carried out by RSA, including the various university-affiliated research and training centers for various types of disabilities. Biomedical research is, of course, still to be carried out through the National Institutes of Health, one of the six major components of the U.S. Public Health Service.

A major improvement added by the Rehabilitation Act of 1973 and strengthened by the 1978 amendments is affirmative action programs designed to foster better employment opportunities for handicapped individuals. Section 501 of the act is designed to facilitate employment of qualified handicapped persons with the federal government. Section 503 requires private employers who are contractors with the federal government to establish affirmative action plans for hiring and advancing qualified handicapped persons in employment.

Special Employment Programs

As a means of creating employment opportunities for qualified blind persons during the Great Depression, the Congress in 1936 enacted the Randolph-Sheppard Act, under which blind persons were granted preference in the operation of concession stands in federal buildings. Named after its sponsors, the then-Representative Jennings Randolph of West Virginia (currently the senior Senator from that state and ranking minority member of the Subcommittee on the Handicapped of the Senate Committee on Labor and Human Resources in the Ninety-seventh Congress) and the late Senator Morris Sheppard of Texas, this law created employment opportunities which were expanded over the years and now enables some five thousand blind persons to earn their own way in vending facilities on federal and other property.

Administered at the federal level by a special unit, now called the Bureau for the Blind and Visually Handicapped, in the RSA, the act is implemented at state level by state licensing agencies, which license blind operators of the facilities installed by the agencies and supervise their operation. Licensing agencies are agencies of state government —separate state agencies for the blind or state vocational rehabilitation agencies—which administer the Rehabilitation Act of 1973 at state level. State agencies also expanded the program to include a substantial number of concession locations in state and local government buildings as well as in privately owned buildings. Depending on their location, vending facilities range in size and variety of articles sold from news, candy, and tobacco stands to snack bars and cafeterias.

Over the years, the growth of vending machines placed in federal buildings with the net proceeds paid to federal employee recreation and welfare groups as well as to federal employee unions, resulted in the curtailment of concessions for blind persons in some locations and a decrease in the income of others. Despite opposition from federal employee groups, the Randolph-Sheppard Act was amended in 1974 to reinforce the statutory priority of blind persons in vending operations on federal property, devise an equitable distribution of vending machine income, and establish administrative appeals procedures to adjudicate grievances among blind vendors, state agencies, and federal agencies.

Another law designed to create employment opportunities for blind persons also originated in the depression of the 1930s. It is the Wagner-O'Day Act, which was passed by the Congress in 1938 to provide a market for the commodities manufactured by blind persons in public and private nonprofit workshops.

Under this act, the federal government was required to give priority to products made in these workshops in its procurement of articles used by federal agencies. A presidentially appointed Committee for the Purchase of Blind-Made Products, consisting of the representatives of the principal federal agencies and a public member, administered the law and determined the products to be purchased as well as what the government would pay for them.

In 1972, as a result of the effort of Senator Jacob K. Javits of New York, the act was expanded to cover commodities made by other severely handicapped individuals in workshops, while preserving the priority for the substantially smaller number of workshops for the blind. In addition, the Javits amendments covered procurement of services by the federal government and granted workshops for the blind a priority in this aspect of the program through 1976. They also altered the composition of the administering agency, changed its name to the Committee for Purchase of Products and Services of the Blind and Other Severely Handicapped, and for the first time authorized it to have its own small staff. A subsequent amendment changed the name of the administering agency to the Committee for Purchase from the Blind and Other Severely Handicapped.

The original act authorized the establishment of a central nonprofit private agency for the purpose of allocating government orders to the various workshops. It was established in 1938 and is known as National Industries for the Blind. The amended act authorized a similar agency for allocating government orders to workshops for other severely handicapped groups known as National Industries for the Severely Handicapped.

As of September 30, 1981, seventy-four agencies for the blind, employing some thirty-one hundred blind persons, many with serious additional disabilities, were participating in this procurement program. At that same time, there were 134 workshops for the other severely handicapped providing goods and services to the federal government. These employ some six thousand handicapped individuals in this program. Goods made in the workshops for federal agency procurement include writing pads, ball-point pens, neckties and rifle belts for the armed services, and bedding. Among the services contracted for are laundry, janitorial, and messenger service.

A major labor law enacted during the New Deal era has important implications for the program under the Wagner-O'Day Act. It is the Fair Labor Standards Act of 1938, which established the minimum wage, hours in the work week, and rates of pay for overtime work, as well as minimum piece work rates. Until 1966, that act specifically provided for exceptions from the prevailing minimum wage for trainees and handicapped workers employed in workshops. That year, in response to a coalition of advocate organizations of and for the blind, the Congress amended that act to establish a floor of 50 percent of the prevailing minimum wage for handicapped workers in workshops. Although some blind and other handicapped workers employed in workshops earn substantially more than the prevailing national minimum wage ($3.35 an hour in 1982), none can be legally paid less than half of that amount; and pay rates increase proportionately as periodic amendments to the act increase the prevailing national minimum wage. Advocate organizations of blind persons continue to seek increases in pay for blind workers in workshops to the prevailing minimum wage.

Special Education

Historically, elementary and secondary state schools for the blind, for the deaf, or for the mentally retarded were established as far back as 1832 and supported by state, local, and private funds. It was not until 1966, with the enactment of Public Law 89-313, that major federal financial aid was provided to state-operated and state-supported schools for handicapped children. This special provision in that law was found to be necessary when it was quickly discovered that the landmark Elementary and Secondary Education Act of 1965 (Public Law 89–10), with its formula for apportioning federal financial aid to local educational agencies on the basis of numbers of economically deprived children, was administratively infeasible for handicapped children in state schools.

However, the need for federal financial aid in the education of blind children, a low-prevalence group, was recognized as far back as 1879, when the Congress enacted Chapter 186, 45th Congress, which, with subsequent amendments, authorized the appropriation of federal funds to the American Printing House for the Blind for the provision of books in raised characters, recorded form, and large print, as well as tangible educational aids, to blind children in residential state schools. In 1956, as the number of blind children in regular local elementary and secondary schools increased substantially, the law was amended to permit provision of educational materials to them as well. Since books and educational aids were distributed on a quota basis according to the number of blind children in a state school or local public school, it became necessary for the Printing House and its colleague organizations to seek amendments increasing the ceiling on appropriations with greater frequency to prevent the quota from shrinking as the number of blind children grew. In 1961, the ceiling on appropriations was eliminated, thereby leaving the quota of books and aids to be purchased and allocated through the Printing House in this unique grant-in-kind program to the justification of the appropriations process. In 1970, another far-reaching amendment added private schools (including parochial schools) to this program.

Recognizing the need to provide adequate numbers of teachers trained in the special education techniques necessary to teach handicapped children, the Congress in 1958 enacted Public Law 85–926 to underwrite the cost of preparing teachers of mentally retarded children. In 1963, the Congress took a major step, providing federal financial assistance for the training of teachers and teacher preparation personnel needed in the education of all types of handicapped children by enacting Title III of Public Law 88–164. In addition, this legislation created authority for grants to finance research and demonstration projects to improve techniques for educating handicapped children, thereby creating the nucleus for what later became the Education of the Handicapped Act.

In succeeding years, the federal financial role in the education of handicapped children was extended and strengthened and in 1970 these various provisions were consolidated in Title VI of the Elementary and Secondary Education Act of 1965 by Public Law 91–230. Title VI is called the Education of the Handicapped Act. In addition to administrative provisions statutorily establishing the Bureau for the Education and Training of the Handicapped (commonly called the Bureau for the Education of the Handicapped) in the Office of Education, the Education of the Handicapped Act contains authority for federal financial aid as follows: grants to states, incentive grants, regional resource centers, centers and services for deaf-blind children, early education for handicapped children, regional education programs, personnel training, research and demonstration projects (including physical education and recreation), instructional media for the handicapped, and special programs for children with specific learning disabilities.

As a result of state court decisions holding that handicapped children must be given an appropriate free public education and not merely held in custodial institutions, state and local governments, advocate organizations, parent groups and others began to petition the Congress for federal financial aid to deal effectively with the large backlog of handicapped children who had been educationally neglected over the years. Congress responded with enactment of landmark legislation, Public Law 94–142, the Education for All Handicapped Children Act of 1975. This law substantially strengthened the "grants to states" provisions of Part B of the Education of the Handicapped Act in an effort to assure a free, appropriate public education and related services for all handicapped children. It should be noted that most handicapped people seeking higher education attend regular colleges and universities, usually as part of a vocational rehabilitation program financed under the Rehabilitation Act of 1973. The only exceptions are Gallaudet College for the deaf, created by federal statute, and the National Technical Institute for the Deaf, also created by federal law to provide postsecondary technical education for deaf students.

Department of Education

On October 17, 1979, the Department of Education Organization Act became law (Public Law 96–88). The provisions of this law creating the new cabinet-level department were implemented by April 17, 1980. The Department of Health, Education, and Welfare (HEW) became the Department of Health and Human Services (HHS) at that time.

Of particular interest is the creation in the new Department of Education of an Office of Special Education and Rehabilitative Services and the transfer to it of various federal agencies previously mentioned. The new office is headed by an assistant secretary and the agencies transferred are: the Rehabilitation Services Administration, the Bureau for the Education and Training of the Handicapped (renamed the Office of Special Education), the National Institute of Handicapped Research, the National Council on the Handicapped, the Interagency Committee on Handicapped Research, the Helen Keller National Center for Deaf-Blind Youths and Adults, and the Office of Information and Resources for Handicapped Individuals. In addition, HEW's functions with regard to Gallaudet College, the National Technical Institute for the Deaf, and the American Printing House for the Blind were transferred to the new department.

Social Services

In 1956, the Congress added authority for provision of social services to promote self-care of cash public assistance recipients to the cash assistance titles of the Social Security Act. State welfare or social services agencies, which administered the cash assistance programs, also administered the social services program, except in Delaware, Massachusetts, New Jersey, North Carolina, and Virginia, where separate state agencies for the blind then administered the Title X cash maintenance and the social services programs for legally blind recipients of all ages. The federal government paid 50 percent of the cost of social services to promote self-care, with the federal share provided on an open-end funding basis.

The Public Welfare Amendments of 1962 strengthened these provisions and authorized federal reimbursement to the states of 75 percent of the cost of specified social services designed to promote self-care and self-support and "prevent dependency." Financing was still open-ended, with the federal government obligated to reimburse states for approved services.

Except in the five states where separate state agencies for the blind had specific legal authority to obtain reimbursement from the federal government, there does not appear to have been much evidence that these social services funds were being used to provide or purchase specialized services for blind persons, particularly for older blind persons. It is likely that older blind persons benefited to some degree in some states from more general social services.

In 1972, as a result of concern in both the Congress and the administration over the rapidly increasing cost to the federal government of social services on an open-end funding basis, Congress, by adding a rider to the General Revenue Sharing Act (P.L. 92–512), put a ceiling of $2.5 billion on the authorization of appropriations for social services while still retaining a 75 percent federal share. Late in 1974, the Congress enacted Title XX of the Social Security Act, establishing a block grant mechanism under which requirements for states to obtain federal funds for social services were minimal and states were given maximum latitude as to the social services they provided. This program is administered at the federal level by the Office of Human Development Services in HHS.

There is a statutory requirement that states must spend 50 percent of social services funds on recipients of SSI, aid to families with dependent children, and medicaid. State agencies for the blind which had previously administered social services programs for blind persons could continue to do so under Title XX. However, as a result of state reorganizations, only agencies in Massachusetts, North Carolina, and Virginia now administer Title XX state plans for blind persons.

Amendments to Title XX in 1976 authorized states to have the option of providing social services on a group eligibility rather than individual means test basis in geographic areas of the state where substantially all of the residents have incomes below 90 percent of the state median income. This has implications for provision of social services to older persons in senior centers as well as older blind and severely visually impaired persons.

In preparing *A Guide to Expanding Social Services to the Blind under Title XX of the Social Security Act,* John L. Duncan, of the American Foundation for the Blind's Governmental Relations staff, reviewed the first-year Comprehensive Annual Services Program (CASP) plans of forty-nine states and the District of Columbia. He found that only seventeen states indicated that they would provide specialized services to blind persons, such as orientation and mobility and rehabilitation teaching services. According to Duncan, these first-year CASP plans estimated that sixty-two thousand blind and severely visually impaired persons would receive these specialized services at a cost of $10.7 million. There was no way of ascertaining whether an individual would receive more than one service. As this is likely, the total number served would actually be lower. It is also likely that blind persons received other general social services, such as homemaker services.[7]

According to the summary of CASP plans for Fiscal Year 1979, prepared by Kilgore and Salmon of the Office of the Assistant Secretary for Planning and Evaluation at HEW, discrete services for the blind, developmentally disabled, and physically handicapped represent 3.7 percent of total Title XX expenditures for that fiscal year. They state that their analysis indicates that discrete services for these groups represent $145.8 million—$9.4 million for the blind, $13.8 million for the physically handicapped, and $122.6 million for the developmentally disabled.[8]

They further point out that thirty-four states said they targeted Title XX services to the blind, but that only thirteen states included "Special Services to the Blind" as a discrete service.[9]

Until adequate financing of independent living rehabilitation services for older blind persons under the Rehabilitation Act of 1973 is realized, Title XX of the Social Security Act continues to be the best potential source of specialized services for this group, as well as other severely handicapped individuals. However, the block grant mechanism fosters competition for services at state levels among a large variety of target groups and their advocates, thus making some small groups vulnerable to the effort of substantially larger and better organized groups in the political process involved, given the limited amount of funds.

Older Americans Act

The Older Americans Act of 1965 was enacted to assure provision of a wide variety of necessary services to the growing proportion of older persons in the population who need them. This is to be accomplished through the establishment with federal financial assistance under the act of state and area agencies on aging, which can serve as advocates to assure utilization by older persons of other federally financed programs, as well as through programs established by the act itself.

The Nutrition for the Elderly program has already been discussed. There is also authority for model projects, including specific provisions for special services to older handicapped Americans. Amendments enacted in 1975 require state agencies on aging to spend not less than 20 percent of their allotments for community services on transportation services, home services, legal and other counseling services, and residential repair and renovation programs.

Administered at the federal level by the statutorily established Administration on Aging, the Older Americans Act of 1965 must still be regarded as having its greatest impact on the lives of older blind and other handicapped persons at some time in the future. Except for the Nutrition for the Elderly program, the bulk of federal funding has necessarily been devoted to the establishment and operation of state and area agencies on aging, research programs, training of personnel, and increasingly for social services. Special services to blind and other handicapped older persons can be handled on a model project basis as well as through community services. These model projects include a variety of special services, such as reader services.

In enacting the 1978 amendments to the Older Americans Act, the Congress substantially expanded demonstration project authority. Of particular interest is section 421 of the act, which authorizes the Commissioner on Aging to make grants and contracts for projects in ten states "to develop or improve methods of coordinating all available social services" for the homebound elderly blind and disabled. In addition, section 422 of the act authorizes demonstration projects in long-term care, both institutional and noninstitutional, which are to include a wide range of rehabilitative and social services.

Reading Services

One of the major handicapping effects of severe visual impairment, including legal blindness, is inability to read printed material with ordinary correcting lenses. Readily available low-vision services financed under a comprehensive national health insurance program—or medicare for those sixty-five years of age and older and disability insurance beneficiaries—would help to solve the reading problem for many severely visually impaired persons. Others will still have to depend on systems which convert the written word into tactile or audible reading methods.

In 1931, Congress enacted the Pratt-Smoot Act, which authorized the Library of Congress to purchase books in braille to be lent to blind adults through regional distributing libraries. In 1933, Congress expanded the program to include sound recordings of books and equipment on which the records could be played. Subsequent amendments extended the program to blind children, removed the ceiling on the authorization of appropriations, and, in 1966, extended the program to other physically handicapped individuals of all ages who cannot handle ordinary printed material.

Administered by the National Library Service (NLS) for the Blind and Physically Handicapped of the Library of Congress, the program covers books in braille and recorded form, instructional music texts and braille music, and playback equipment for pressed records, embossed records, and cassette tapes. Eligible readers may borrow books and playback equipment through regional distributing libraries—many of them state or municipal libraries or state agencies for the blind—which can receive a small amount of federal financial aid for this service under the Library Services and Construction Act, administered by the Department of Education. In some areas, playback equipment is distributed by local agencies for the blind. Books are generally borrowed and returned to libraries by mail at no cost to readers as a result of federal legislation which subsidizes this cost to the U.S. Postal Service.

The books for the blind and physically handicapped program is the most significant current source of recreational and informational reading material for older blind and severely visually impaired persons. As most of them lose their sight in middle age or later, comparatively few will learn to read braille proficiently enough to enjoy extensive reading tactually. Most blind persons now use recorded books. The Fiscal Year 1982 appropriation to the Library of Congress for this program is $33.4 million.

Radio Reading Services is a recent development helpful to persons who cannot read ordinary printed material. The services are operated by a variety of agencies, including those established specifically for that purpose, and use a subcarrier channel of a cooperating local commercial or educational FM radio station to carry their programs. A pretuned FM radio receiver is required by those who use the service. The Educational Broadcasting Facilities and Telecommunications Demonstration Act of 1976 authorized grants to public broadcasting facilities to cover 75 percent of the cost of these radio receivers.

Programming varies with each Radio Reading Services organization, but it generally does include live reading of local newspaper articles and grocery and other retail store advertisements. The Corporation for Public Broadcasting, which receives a direct federal appropriation, is actively interested in Radio Reading Services and already has the authority to make grants for some programming if it decides to do so.

Grants and contracts from the Rehabilitation Services Administration (RSA), the Office of Special Education, the Veterans Administration, and the National Science Foundation have assisted in the research and development of a variety of devices to read print using tactile and audible signals. The most promising of these appear to be the Optacon, which converts print into magnified tactually discernible form, letter by letter, and the Kurzweil Reading Machine, which converts print into synthetic speech. The latter is still in prototype form, and individual machines will be expensive unless advances in computer technology make cost reduction feasible.

A new section 314 of the Rehabilitation Act of 1973, added by the 1978 amendments, authorizes the commissioner of RSA to make grants to states "or to private nonprofit agencies or organizations of national scope (as so determined by the Commissioner)'' to provide reading services to blind persons who are not otherwise eligible for such services through other state or federal programs, that is, to blind persons not enrolled in a vocational rehabilitation agency program. This new RSA program is designed to expand the quality and scope of reading services and ''to assure to the maximum extent possible that the reading services provided under this Act will meet the reading need of blind persons attending institutions providing elementary, secondary, or postsecondary education, and will be adequate to assist blind persons to obtain and continue in employment.''

Grants to states for reading services are to be administered by the state vocational rehabilitation agencies or state agencies for the blind. Reading services are defined to include the employment of persons who will read aloud; transcriptions of printed information into braille or sound recordings on an individual request basis; storage and distribution of braille and recorded materials; purchase, storage, and distribution of equipment and materials needed for production, duplication, and reproduction of braille materials and sound recordings; purchase, storage, and distribution of equipment to blind persons to provide them with individual access to printed materials by mechanical or electronic means; and radio reading services for blind persons. No funds were appropriated for section 314 in Fiscal Year 1982.

Prohibition of Discrimination

No discussion of federal legislation on blind and other handicapped persons would be complete without mention of some of the developments in legislation prohibiting discrimination.

The Age Discrimination in Employment Act of 1967 prohibits discrimination in employment on account of age for individuals between the ages of forty and seventy. District offices of the Equal Employment Opportunity Commission process complaints.

Section 504 of the Rehabilitation Act of 1973 prohibits discrimination against otherwise qualified handicapped individuals in federally assisted programs. The federal agency which administers the funding of the program concerned processes complaints. Amendments in 1978 cover programs and activities of any executive branch agency and the U.S. Postal Service. A new section 505 of the act, also added by the 1978 amendments, provides that the remedies, procedures, and rights under Title VI of the Civil Rights Act of 1964 shall be available with regard to complaints of discrimination under section 504.[10] Courts are authorized to award attorney's fees to the prevailing side (other than the U.S. government) in any actions to enforce Title V of the Rehabilitation Act of 1973.

For the purpose of eliminating duplication, inconsistencies, and competition among federal agencies with regard to enforcement and implementation of the provisions of Title V of the Rehabilitation Act of 1973, section 507 established the Interagency Coordinating Council, consisting of the secretary of HEW, the secretary of labor, the attorney general, the chairman of the U.S. Civil Rights Commission, the chairman of the Equal Employment Opportunity Commission, and the chairman of the Architectural and Transportation Barriers Compliance Board.

The Age Discrimination Act of 1975 prohibits discrimination on account of age in federally assisted programs, including general revenue-sharing programs. It specifically exempts from its coverage the Age Discrimination in Employment Act of 1967 and programs targeted on specific age groups, such as Headstart. A study by the U.S. Commission on Civil Rights of patterns of discrimination on account of age in federal financial assistance programs revealed that individuals over age forty-five were discriminated against in the provision of a variety of services, including vocational rehabilitation and social services. Complaints are processed by the regional office of the federal agency administering the assistance program, except for HHS programs. The Office of Field Services, Office for Civil Rights, at HHS in Washington, D.C., processes complaints regarding HHS programs.

The State and Local Fiscal Assistance Amendments of 1976 prohibit discrimination on account of race, color, national origin, sex, age, and handicapping conditions in programs financed with general revenue-sharing funds. At the federal level, general revenue sharing is administered by the Department of the Treasury.

All of these laws can have considerable impact on blind and other handicapped persons if vigorously enforced.

Architectural Barriers

In recent years, there has been increasing concern about architectural barriers limiting access of handicapped individuals to programs as a result of inaccessibility of buildings. The Architectural Barriers Act of 1968 provides for construction of public buildings designed to make them accessible to handicapped persons, as well as for modification of existing public buildings, including libraries. Although most orthopedically handicapped persons may not be eligible for the Library of Congress's National Library Service for the Blind and Physically Handicapped program, others will be, and removal of architectural barriers in regional distributing libraries would make library visits more feasible.

Public Law 95–602 broadened the membership of the Architectural and Transportation Barriers Compliance Board established by section 502 of the Rehabilitation Act of 1973. It provides for the appointment of eleven public members by the president, five of whom shall be handicapped individuals. In addition, the heads of the following federal agencies or their designees are to be members: the Department of HHS, the Department of Transportation, the Department of Housing and Urban Development, the Department of Labor, the Department of the Interior, the Department of Defense, the Department of Justice, the Veterans Administration, and the U.S. Postal Service.

The board is given the authority to prescribe and enforce standards under the Architectural Barriers Act of 1968. In addition, the scope of its authority is increased to include communication barriers.

The law authorizes the board to provide technical assistance to "any person or entity" to facilitate compliance with section 502 of the Rehabilitation Act of 1973. In addition, the board is authorized to make grants to state vocational rehabilitation agencies and other organizations for studies to assess the cost of making programs accessible. The law also authorizes the board to sue and be sued in its own name.

Conclusion

Major federal laws have created programs of benefits and services of considerable significance to blind and handicapped persons.[11] However, from the point of view of handicapped people, shortcomings in some major programs—income security, health care, food and nutrition, housing—while they affect all eligible persons for a variety of reasons, may be more acutely felt by blind and handicapped persons because of the serious problems added by their handicapping conditions. And shortcomings in other major programs—vocational rehabilitation, the Older Americans Act, social services under Title XX of the Social Security Act—stem from the need to focus on handicapped persons of optimum employable age, on underfinancing, or on the vast scope of diverse services coupled with too many eligible people for the funds available. In addition, the new block grant method for administration of Title XX and other programs creates competition at the state level for available funds and services between beneficiary groups.

Major gaps in services to older blind and severely visually impaired persons continue to be lack of general availability of quality low-vision services with the cost covered by private health insurance or a government-financed program, as well as the lack of adequate financing of specialized services designed to foster independent living and prevent premature institutionalization. The last mentioned gap applies to all types of severely handicapped individuals for whom vocational rehabilitation is not currently considered to be feasible. No federally created health care program covers low-vision services for all who might benefit. The only federally authorized programs under which specialized services for independent living can currently be provided—Title XX of the Social Security Act and Title VII of the Rehabilitation Act of 1973—either are required to do too much (Title XX) or are woefully underfinanced (Title VII).

Undoubtedly, the most effective way of assuring older blind and severely visually impaired persons of low-vision and specialized independent living services, such as rehabilitation center training, orientation and mobility services, and training in other daily living skills, is to cover them as health and allied health services under medicare and, subsequently, under a comprehensive national health insurance program. Similarly, long-term care services, such as homemaker and mobile meal services, could be covered under medicare and a national health insurance program for those who need them as a means of delaying costlier institutionalization.

The advantage of coverage of these services as part of a comprehensive national health insurance program are uniformity of entitlement and payment mechanisms and assurance of quality professional standards through accreditation of providers of services. Unlike existing federal-state matching fund programs, a comprehensive national health insurance program would not be subject to the vagaries of federal and state appropriations processes with their dependence on matching fund allocation formulas and inevitable limitation of the numbers of people served.

Until a truly comprehensive national health insurance program is implemented, Title VII of the Rehabilitation Act of 1973, covering independent living rehabilitation services to handicapped persons of all ages without regard to potential employability, will have to meet the need. This federal-state matching fund program could be phased down as medicare and national health insurance increasingly cover the cost of these services.

However, the history of human services programs in the United States has demonstrated that federal financial assistance is essential to assure their continued support and development. The adequacy of these programs is inextricably dependent upon a healthy economy to produce the revenues needed to underwrite their cost. Therefore, the rate of development of needed human services programs can never be permitted to exceed the ability of the national economy to support them without prejudicing the existence of the programs themselves.

NOTES

1. U.S., Department of Health and Human Services, National Center for Health Statistics, *Prevalence of Selected Impairments: United States, 1977*, by Barbara A. Feller, Vital and Health Statistics Series 10, no. 134 (Washington: Government Printing Office, 1981), p. 15.

2. See, for example, Thomas J. Carroll, *Blindness: What It Is, What It Does, and How to Live with It* (Boston: Little, Brown, 1961).

3. National Society for the Prevention of Blindness, *Data Estimates on Vision Problems in the U.S.* (New York: National Society for the Prevention of Blindness, 1980) part 2, *Data Analysis*, p. 5.

4. National Center for Health Statistics, *Prevalence of Selected Impairments: United States, 1977*, p. 8.

5. National Center for Health Statistics, *Chronic Conditions and Impairments of Nursing Home Residents: United States, 1969*, by Alvin Sirrocco, Vital and Health Statistics Series 12, no. 22 (Washington: Government Printing Office, 1973), p. 13.

6. National Center for Health Statistics, *Prevalence of Selected Impairments: United States, 1971*, by Charles S. Wilder, Vital and Health Statistics Series 10, no. 99 (Washington: Government Printing Office, 1975), p. 25.

7. John L. Duncan, *A Guide to Expanding Social Services to the Blind under Title XX of the Social Security Act* (New York: American Foundation for the Blind, 1976), pp. 19–54.

8. Gloria Kilgore and Gabriel Salmon, *Summaries and Characteristics of States' Title XX Social Services Plans for Fiscal Year 1979* (Washington, D.C.: Government Printing Office, 1979), pp. 176, 181, 174.

9. Ibid., p. 175.

10. The Civil Rights Commission Act Amendments of 1978 expanded the Civil Rights Commission's jurisdiction to include protection against discrimination based on handicap. The definition of *handicap* to be used in such cases is the same as that contained in the Rehabilitation Act of 1973.

11. Earlier summaries of laws are provided in Helga Lende, *Federal Legislation Concerning Blind Persons in the United States and Insular Possessions* (New York: American Foundation for the Blind, 1958); M.L. Lavor, "Federal Legislation for Exceptional Persons: A History," *Public Policy and the Education of Exceptional Children* ed. Frederick J. Weintraub et al. (Reston, Va.: Council for Exceptional Children, 1976); U.S., Executive Office of the President, Office of Management and Budget, *Catalog of Federal Domestic Assistance* (Washington: Government Printing Office, 1979). In addition, other relevant laws are discussed elsewhere in this volume, for example, the Library Services and Construction Act.

A History of the National Library Service for Blind and Handicapped Individuals, the Library of Congress

Today people who cannot hold, handle, or read conventional print materials because of physical handicaps are eligible for free library service through a national network of diverse kinds of libraries cooperating with the National Library Service for the Blind and Physically Handicapped (NLS) at the Library of Congress.

This library service began modestly on March 3, 1931, when President Herbert Hoover signed into law an act, commonly known as the Pratt-Smoot Act, to provide embossed books for adult blind residents of the United States and to allow circulation of those books through selected libraries serving as regional centers.[1] On the following day, a joint resolution of the Senate and the House of Representatives provided $100,000 for the fiscal year of 1932 to enable the Librarian of Congress to carry out the congressional mandate.[2]

Background

An environment conducive to passage of the Pratt-Smoot Act resulted from the efforts of many organizations and individuals interested in increasing the supply of reading materials for blind adults.

The Library of Congress

In 1897, the year the Library of Congress moved from the Capitol to a new building across the street, the new Librarian of Congress, John Russell Young, opened a reading room for the blind, deeming it "wise to make some provision for" blind persons "in a library of a

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This chapter was researched and written by staff members of the National Library Service for the Blind and Physically Handicapped (NLS), the Library of Congress. Other than quotations, data gathered from NLS annual reports and other internal documents and from interviews are not footnoted.

national character." Seventy blind people in the area were invited to use the collection of some two hundred volumes (about forty titles) and the writing slates, typewriters, and other devices that were soon provided. The program met with success, and "many ladies and gentlemen volunteered their services to . . . give readings" of books not available in tactile form.[3] Musicales, lectures, and other entertainments were soon added and were attended by many sighted people as well. The assistant in charge, Etta Josselyn Giffin, encouraged patrons who had graduated from schools for the blind to transcribe embossed books from dictation, often paying them six cents a page from donated funds; about 300 books were added to the collection by 1912 in this way.[4]

In 1910, Librarian of Congress Herbert Putnam transferred Giffin and the reading room's collection to the District of Columbia Public Library on the grounds that its services were more appropriately provided by a municipal library. Unlike other Library of Congress functions, the reading room did not involve research or scholarship. Furthermore, its services were not primarily national in character. Its entertainments, for which the city library had a much larger hall, and its book services benefited only local residents. Although reference service was extended nationally, it naturally followed the collection.

The public library could not serve blind readers outside the city limits in nearby Maryland and Virginia and had no money to buy more books. Dissatisfied patrons petitioned four senators to intercede with Dr. Putnam, who agreed to reinstate the reading room in the Library of Congress provided its services became national in scope, at an estimated cost of $7,500 annually. In anticipation of these funds, the reading room was reopened in The Library in January 1912; however, Congress subsequently appropriated only enough for a single position, $1,200. Uncertainty in some quarters about the future of library services for blind readers at the Library of Congress had led to the incorporation of the National Library for the Blind, in Washington, D.C., a private nonprofit organization, and Giffin became its director.[5]

In October 1912, Gertrude Rider became the assistant in charge of the reading room in the Library of Congress. She found a collection of about 2,000 volumes, "uncatalogued and unclassified," used by fewer than 150 readers, almost exclusively local residents. When she retired in 1925, the reading room, by then "officially designated as 'Service for the Blind,' " had "developed from a small local book-circulation service into a widely known and much sought bureau of information, a directing agency for welfare undertakings in behalf of the Nation's blind, and a notable circulating collection worthy of the Federal Government and of the National Library."[6] It was serving more than 2,400 readers across the nation and referring readers to local libraries whenever possible, lending more than 42,000 volumes annually, and issuing catalogs and lists of new titles in the collection, which had grown to more than 13,000 volumes. Three-fourths of this increase occurred in the last half of Rider's thirteen years of service, through purchases, gifts, and, in part, as a result of a 1913 act which required the American Printing House for the Blind (APH) to deposit with the Library of Congress a copy of every book for blind children the printing house produced with federal funds.

Braille Presses

Like most braille presses in this country in the early 1920s, APH had developed in association with a school for blind children, to provide educational materials; it was originally the print shop for the Kentucky School for the Blind. While most such presses continued to meet only local needs, in 1858 APH was chartered by the Kentucky legislature as a nonprofit printing house to supply educational materials nationwide. In 1879, Congress made it the official printer of textbooks for blind children, providing an annual subsidy. Commercial production of braille has never been feasible. The demand—further reduced in the early days by the multiplicity of touch-reading codes in use—has always been too small for profitable mass production. In addition, braille books are very bulky compared to print and therefore expensive both to ship and to store. A Bible brailled on one side of the paper in the early 1920s ran to more than forty volumes. The cost and sheer bulk of braille materials precluded personal collections, hence the great need not only for textbooks but also for lending libraries for adults once the education of blind children was well under way.

By the early 1920s, three other braille presses were large enough to provide materials nationally—the Howe Memorial Press in Boston, affiliated with the Perkins School for the Blind; the Clovernook Printing House for the Blind in Cincinnati, affiliated with the Clovernook Home and School for the Blind; and the Universal Braille Press, established with the help of philanthropic individuals in 1920, and owned by Robert Atkinson, who was blinded as an adult. All three were nonprofit organizations supported by private philanthropy or government subsidy.

The presses thus were largely under the control of educators, and their primary business was providing educational materials for children. The selection of adult titles to be produced depended on the donors' preferences or the educational value of the works, rather than on the tastes of the readers or a rational plan for developing a well-balanced braille literature comparable to a public library collection. The bulk of braille materials consisted of children's books, textbooks for children, and religious or inspirational works.

Volunteers

World War I provided the stimulus for both greater responsiveness to adult readers' needs and organized volunteer handtranscriptions. The concurrence of two events in 1918 was significant. Rider volunteered to serve as librarian at what came to be called the Evergreen School for the Blind near Baltimore, established in November 1917 to provide prevocational and some vocational rehabilitation to U.S. servicemen blinded in the war. And earlier that year, the United States had concluded the domestic battle of the dots by adopting a new embossed code as its uniform type, rejecting the various embossed dot systems in use at the time. In order to take full advantage of the limited literature available, the blind reader had had to learn some half-dozen codes. Few did, among them Helen Keller.[7] Charles W. Holmes described a comparable state of affairs sighted people would not have tolerated:

> Imagine for a moment the ridiculous situation that would arise, if the daily papers

> published in Boston had an entirely different system of characters from those used by New York publishers, and that a Philadelphia man could not read either without special training, because his own city had adopted a third, as unlike the others as the Chinese characters are unlike the Roman.[8]

The much-needed uniform code, Revised Braille, grade 1½, lay "halfway" between British grade 1, which spelled out each word letter by letter, and British grade 2, which used many contractions, such as the letter *b* for *but* and a special sign for *ness*.

The adoption of the uniform type and the founding of Evergreen—the only school for blind adults except for a few workshops and industrial homes—meant that blinded servicemen were "practically the only adult readers wholly dependent upon" the new type.[9] It also meant that grade 1½ braille materials were in short supply during the transition to the new type. Rider organized a small collection of braille books at Evergreen, the nucleus of which was lent by the Library of Congress. And she began a volunteer braille transcribing service to provide the recreational reading materials needed to maintain the servicemen's morale. Handtranscribed single copies of books, long a major component of library collections in Europe, were not widely available in American libraries. But "hundreds of men and women volunteered to copy into Braille any reading for the soldier blind. . . . It promised something needed . . . and not otherwise provided for."[10]

High standards assured accuracy. Qualifying transcribers were given certificates and blind experts proofed every page. During one twelve-month period, the volunteers turned out 195 titles for adult readers to the braille presses' 20.[11] In 1921, Rider's volunteer transcription project became an official program of the National Headquarters of the American Red Cross, which recruited volunteers throughout the country to work under Rider's direction. That year the American Red Cross published a braille transcribing manual "designed to teach sighted volunteers by correspondence to write accurate Braille";[12] it had been prepared jointly by the Library of Congress and the Red Cross.[13] By August 1925, about 900 volunteer braille transcribers had been certified.[14] In 1923, a proofreader's manual was published for correspondence courses for blind people, providing them a means of gainful employment. In 1931, The Library could state that "so far as is known, this is the only book of its kind in existence."[15]

But hundreds of hours of work by volunteers, who usually paid for their own braillewriters and braille paper, resulted in only a single copy of each title. In 1925, the first handcopied book was duplicated by Red Cross volunteers, using the Garin process, a not entirely satisfactory method of stiffening the handcopied pages sufficiently to allow them to be used as plates for printing a limited number of copies, which were distributed to libraries around the country. By the mid-1920s, volunteers were brailling for their local libraries as well as for the Library of Congress. Thus the stimulus provided by blinded veterans was turned to the benefit of the civilian blind population as well.

The Veterans Bureau, which had assumed responsibility for Evergreen from the Red Cross in 1922, closed the school in 1925. Offering to provide continuing and personal service to blinded veterans wherever they lived, Rider was instrumental in moving to the Library of Congress both the Evergreen braille collection of some 1,500 volumes and the volunteer transcription service. The Braille Transcribing Service became a joint project of The Library and the Red Cross. The latter provided staff and materials, and the former a director and office space. By the 1930 fiscal year—a record year for volunteer transcription at the time, with almost 220,000 pages handcopied and almost 185,000 pages proofed—184 chapters of the Red Cross in forty-two states, the District of Columbia, and the Philippines were participating in the program and two people at the transcribing service at The Library were working nearly full time giving correspondence courses.

The American Library Association

At the same time she was organizing the volunteer project, Rider asked the American Library Association (ALA) to raise money for press-brailling books needed in multiple copies in grade 1½ for the war blind. ALA had long been interested in books for blind readers. (As far back as 1907, a member of ALA's new Committee on Library Work with the Blind had suggested that a central library of books for blind individuals was needed, with materials available nationwide.)[16] ALA responded to Rider's request with enthusiasm. Its Library War Service Committee initiated press-brailling of vocational texts and other books, often with funds supplied by the books' authors or publishers or by philanthropic organizations, such as Lions Clubs, or individuals. For example, Mrs. Jack London agreed to meet the cost of brailling one of her late husband's stories.[17] Through ALA, Mary Roberts Rinehart gave $500 for embossing her latest book, *Love Stories;* and Booth Tarkington gave $300 to make the plates for *Penrod.*[18] By July 1922, ALA had raised funds for brailling eighty-three titles.[19]

In 1923, the Veterans Bureau was authorized by Congress to spend up to $100,000 for braille books for veterans, with three copies of each title going to the Library of Congress collection. For that sum, only sixty-seven titles in editions of fifteen copies could be produced. By far the greatest part of the cost of brailling lay in making (stereotyping) the metal plates. In many cases, with donors paying for the expensive plates, copies could be sold at relatively nominal cost to libraries. In 1924, ALA and the Veterans Bureau shared the cost of press-brailling Burton J. Hendrick's *Life and Letters of Walter H. Page*. The plates for the ten-volume braille edition cost $1,200; the cost per copy exclusive of this initial expense was about $42.[20]

In addition to promoting the production of braille books, ALA published lists of books in the new uniform type, grade 1½, that were available for purchase, *Booklist of Revised Braille*. In its December 1923 issue, *Outlook for the Blind* began publishing these lists and a review column on braille books, "Book News," also contributed by ALA. And in 1923, ALA published its third finding list of books in 12-point type or larger with good leading, *Books for Tired Eyes*.[21]

In 1926, the majority of the ALA Committee on Work with the Blind believed that, with a few additional large collections, the country could be districted, "each district to be served by its regional library as far as the resources of that library" permitted, "with the understanding that any library" for blind readers would "meet a legitimate demand from any locality."[22] In fact, "a self-imposed, uncoordinated" districting system without "precise boundaries of responsibility" was already in use.[23] The municipal public libraries of

Chicago and New York City; the Wayne County Library in Detroit; the Perkins School for the Blind, in Watertown, Massachusetts; and the California State Library in Sacramento already were serving patrons in large areas, and, since at least 1916, the Library of Congress's Service for the Blind had been referring readers to local libraries with the books requested. But these libraries' collections were diverse, and restricting service to specific areas impractical.

After volunteers began handtranscribing books for their local libraries in the mid-1920s, ALA undertook to conduct a clearinghouse of handcopied titles. Lucille A. Goldthwaite, of the New York Public Library's department for blind readers, compiled lists of handcopied books in various local libraries. These lists were published regularly in the *Outlook* from the March 1927 issue to the end of 1931, when that function was taken over by the *Braille Book Review,* of which more later.[24] ALA also published a revised "brief introduction to the library problems peculiar" to service for blind readers, *Library Work with the Blind,* in 1930.[25] And, in 1927, it asked the American Foundation for the Blind (AFB) to conduct a survey of libraries for blind persons.

The American Foundation for the Blind

AFB was founded in 1921 by the American Association of Workers for the Blind and the American Association of Instructors of the Blind, whose president the previous year was the director of Evergreen. These groups wanted to establish a national nonprofit body representative of and responsive to every aspect of work for blind people, cooperating with agencies working for blind people and doing such things as they were not doing or could not do. Among AFB's objectives was legislation at all levels of government for the welfare of blind and partially sighted persons. Its organization included bureaus of information and publicity, research, and education. The education bureau was expected to cooperate with embossing plants and with libraries to improve the quality and increase the quantity of embossed literature, while the bureau of research was to develop and standardize devices and procedures, particularly those relating to embossing and printing, and to increase the number of blind readers. AFB was to be an organization that unified the work for blind people.

In 1923, AFB took over from Charles Campbell publication of the quarterly *Outlook for the Blind*, which included announcements of all embossed books available for purchase. In 1924, AFB began conducting a clearinghouse for press-braille titles to be embossed, the Embosser's List, in order to avoid duplication of effort among producers. Like ALA, it raised funds to increase the "distressingly limited number of braille books."[26] In one three-year period it raised enough money for seventy titles, requiring 131 volumes, in editions of eleven copies each, one for each leading library for blind readers in the country. Among the donors was Mrs. Andrew Carnegie, who paid $1,140 for the production of the six-volume braille edition of her husband's biography.[27] By the late 1920s, building on earlier work by the Howe Press, the *Matilda Ziegler Magazine* printing plant, the Universal Braille Press, and others in this country as well as Europe, AFB established the feasibility of interpointing braille. This process is the precision embossing of braille on both sides of the page so that the dots on one side fall between the dots on the other. Interpointing reduces the bulk of braille books by about one-third and the cost by almost as much. This advance was in large part the result of work in the AFB experimental mechanical shop, financed by a grant from the Carnegie Corporation brought about through the influence of ALA.[28]

Libraries for Blind Readers

In 1928, AFB undertook the survey of libraries for blind readers in the United States and Canada requested by ALA. At the time, there were about 100,000 blind people in the country, 90 percent of whom had lost their sight as adults, and 20 percent of whom could read braille literature.[29] The AFB study found that fewer than 10,000 blind people in this country were library patrons, that libraries had difficulty obtaining books because there were so few sources, none commercial, and that some readers were borrowing books from several libraries.[30] Only fifteen libraries for blind readers were large enough to have a full-time attendant, most of them in the northeastern part of the country, with none in the South. Such libraries assumed an unfair financial burden in serving the reading needs of the nation's blind population.[31] Robert Irwin, director of research and education at AFB from 1923 to

1929 and executive director from 1929 until his retirement in 1949, described what had happened in the years after the first library for blind readers, outside of schools, was established in Boston in 1868:

> Three or four score of libraries in the United States purchased collections of embossed books. . . . The blind population of the territory usually served was small, and after a short period of enthusiasm the books were for the most part read and the demand fell off. As the blind people ceased to call at the library for books these bulky volumes were gradually relegated to the back rooms and because of the apparent lack of interest fresh accessions were not added. In time it became evident that few communities have a sufficient number of blind readers to maintain a very active circulation of embossed books.[32]

What made library service for blind readers feasible was free mailing privileges for embossed books on loan, granted by Congress in 1904.[33] It is still a crucial part of such service. Blind people who had read their local libraries' books and readers in small towns and rural communities, as well as those in larger cities with no libraries for blind people, began applying for braille books by mail. For example, the Columbus, Ohio, library mailed out only 12 to 30 embossed books annually before 1904; in the first year of free mailing privileges for library books, circulation rose to 112, and four years later to 653.[34] A "few progressive libraries" put their collections in the hands of attendants who encouraged mail order circulation and

> gradually built a large clientèle spread in many instances over several states. . . . Libraries having no regular attendant to promote this activity were unable to handle satisfactorily the mail requests, and in time practically discontinued all library work for the blind. . . . [By 1929] more than ninety percent of the books lent by libraries for the blind . . . [were] called for by mail or telephone, and practically all . . . [were] sent out through the postoffice.[35]

Thus, because of the dearth of embossed materials in any one library, diverse collections, and the low density of the blind population, the largest libraries were both understocked and overextended—related phenomena. For example, the New York Public Library's collection of about 1,000 embossed books in 1930, quite a large collection for that time, was minuscule compared with its 1 million books for sighted patrons.[36] Blind readers outside the library's geographical tax base naturally wished to avail themselves of these books and books in other libraries outside their communities. Fifty-five percent of the Chicago Public Library's blind patrons lived outside the city, 60 percent of the Cleveland Public Library's, and 90 percent of the Cincinnati library's. The New York State Library for the Blind served readers in thirty-two states.[37] The major problem was not so much providing services through these large libraries as the dearth and cost of books.

A National Program

By 1930, then, circumstances were favorable for circulating to blind adult readers braille books underwritten by federal funds. Precedents for federal support existed in the APH subsidies for educational materials for blind children and in the Veterans Bureau purchase of braille materials for blinded veterans, as well as in the special mailing privileges for sightless individuals. The Service for the Blind of the Library of Congress was considered a national source, lending books to more than 3,000 readers in forty-eight states plus the District of Columbia, and, when possible, referring patrons to libraries nearer them, in a loosely districted arrangement. Interpointing had reduced the cost of brailling considerably, enough existing braille presses were eager to print more books, and the thriving volunteer program, directed from the Library of Congress, was supplementing press-braille grade 1½ books in collections around the country. The AFB survey provided valuable statistical support for passage of federal legislation. The demand for library service and popular titles was growing due to the increase in literacy. And public awareness of the reading needs of blind people increased after World War I, when attitudes were changing from pity and condescension to constructive helpfulness.

Early in 1930, three bills proposing the use of federal funds to provide books for blind adults were introduced in the House of Representatives by Representatives Ruth Pratt of New York, Joe Crail of California, and Lister Hill of Alabama. The federal program was born amid surprising controversy.[38] Essentially, the bills differed in three ways: the size of the appropriation, the administering agency, and the method of distribution. The Pratt bill called for a $75,000 appropriation to be administered by the Library of Congress; the Crail and Hill bills for $100,000 to be administered respectively by the Braille Institute of America, a recently incorporated nonprofit arm of the Universal Braille Press, and by ALA, although the latter had already endorsed the Pratt bill. The Pratt bill provided for the Librarian of Congress to select regional libraries which would circulate the books to readers; the other two bills called for books to be distributed among the country's libraries, the Crail bill on a pro rata basis considering the number of blind patrons of each library.

After hearings before the House Committee on the Library for the Pratt bill and before the House Committee on Education for the others, the Hill and Crail bills died in committee. Amended to raise the appropriation to $100,000, the Pratt bill was reported out of committee favorably but was not voted upon before Congress adjourned, although its companion Senate bill, introduced by Senator Reed Smoot of Utah, was passed without debate on May 12, 1930. Representative Pratt and Senator Smoot reintroduced their bills in December 1930; shortly thereafter, the Crail bill was also reintroduced. The Senate again passed the Smoot bill without debate, in January 1931, and the Pratt bill was passed by the House on February 28, 1931, after considerable debate.

Passage of the Pratt-Smoot bill was "a recognition by Congress" that blind people "shared with the sighted a desire and capacity for intellectual development and pursuits; that they possessed . . . ambitions and aspirations, talents and capabilities worthy of encouragement and enhancement, not only for" their own benefit "but for the betterment and benefit of the entire Nation."[39]

Project, Books for the Adult Blind

In response to the congressional mandate, the Library of Congress created the Project, Books for the Adult Blind, which began operations with the start of the new fiscal year, on July 1, 1931. At its inception and for many years thereafter considered a "philanthropic activity of the United States Government," the project was "administered with the view of confining all expenditure, as far as practically possible, to . . . the actual providing of books for the blind." By accepting "numerous services from many sources," The Library could arrange for the rest of the work to be absorbed by its existing personnel, aside from clerical help.[40]

That first year, 157 books selected to be embossed in braille or in Moon type (which used angular roman letters more easily read by older people than was braille) were "approved by the Librarian of Congress . . . from suggestions received from the librarians serving the blind and from the blind readers themselves."[41] The first book ordered was Woodrow Wilson's *George Washington*, in honor of the bicentennial anniversary of Washington's birth. Other works selected were Jeans's *Universe around Us*, Clendening's *Human Body*, Chaucer's *Canterbury Tales*, Homer's *Iliad* and *Odyssey*, Turner's *Frontier in American History*, Sandburg's *Abraham Lincoln: The Prairie Years*, and such works of fiction as Buck's *Good Earth*, Hugo's *Les Miserables*, and Hawthorne's *Scarlet Letter*, as well as Rinehart's latest mystery, *Miss Pinkerton*. The project's primary objective was "to furnish blind readers with the best literature in all fields of knowledge, not already available to them."[42] As many distributing librarians promptly reported, this basis of selection did not entirely satisfy blind readers, many of whom preferred light fiction.

The books were circulated to readers by libraries across the country, chosen on the basis of suggestions made by ALA and AFB:

New York State Library (Albany)
Georgia Library Commission (Atlanta)
Texas State Library (Austin)
Chicago Public Library
Cincinnati Public Library
Cleveland Public Library
Denver Public Library
Wayne County Library (Detroit)
Library of Hawaii (Honolulu)
New York Public Library
Free Library of Philadelphia
Carnegie Library of Pittsburgh
California State Library (Sacramento)
Michigan State Library for the Blind (Saginaw)
Saint Louis Public Library
Seattle Public Library
National Library for the Blind, Inc. (Washington, D.C.)
Perkins Institution Library (Watertown, Massachusetts)
Service for the Blind, the Library of Congress (Washington, D.C.)

In the first year of operation, the public libraries of New Orleans and Omaha were added to the original nineteen.

The project was administered—first by the director of the Legislative Reference Division and then, from November 1935 to June 1940, by the Chief Assistant Librarian—quite independently of both the distributing library at the Library of Congress (Service for the Blind), which was part of the Reading Room Division, and the Braille Transcribing Service. However, cooperation was usually close.

The most obvious and immediate impact of the Pratt-Smoot Act on the Library of Congress distributing library was an increase in the number of new books acquired because of the additional works supplied by the Project, Books for the Adult Blind. Thus, between Fiscal 1932 and Fiscal 1934, an average of about 60 percent of the library's new books were supplied by the project, and the number of acquisitions was 60 percent greater than the average of the three previous years. The demand for this "bewildering supply of new books" increased greatly while requests for older books fell, and the library was hard put to prepare the new materials for circulation.[43] Because of the physical differences between print and braille books, it did its own cataloging, eschewing the use of Library of Congress printed cards. Thus, the staff had to type entry cards for author, title, shelf list, and accession files, as well as letter, book pocket, and shelve the new materials before circulating them to waiting readers.

Service for the Blind distributed annual or semiannual Books for the Adult Blind–produced print lists of project materials and of the distributing libraries where they could be borrowed. It encouraged patrons to use the libraries nearest them. However, unwilling to work "too much hardship upon the borrowers," it accommodated the many readers who borrowed from its extensive collection of handcopied (grade 1½) books and preferred to read its press-braille books as well, since it was simpler to be responsible to only one library.[44] By 1934, circulation was down only 5 percent over 1931, strongly suggesting that it took "time and no little persistence to convince readers" to use the nearest distributing library.[45]

The impact of the Project, Books for the Adult Blind, on the Braille Transcribing Service was potentially greater. In 1932, its output of volunteer-produced materials exceeded that of any previous year. Both the transcribing service and the Library of Congress distributing library—the assistant head of which was the director of the Braille Transcribing Service—reassured Red Cross volunteers that they were still needed to supplement the project by transcribing special books in limited editions and light fiction. No "radical change in the existing organization of the work of hand copying" was expected, except a "sharper division of the kinds of books to be copied."[46] The volunteer service would have to keep itself informed about the project's production plans and to watch the Embosser's List (of forthcoming brailled works) so as to be able "to assign a book to a transcriber with tolerable certainty" that it would not be mass-produced "for a long time, if ever." This caution applied particularly to volunteer press works. A book that was both hand transcribed in a single copy and small press-brailled by volunteers was still useful in small libraries. But no distributing library would be "willing to pay even the small amount asked by the Red Cross," the cost of paper and binding, if it could "have the same book as a gift" through the project.[47]

The federally funded production, under the administration of the Library of Congress, of embossed books to be circulated by existing libraries serving blind readers around the country was the logical next step in the evolution of library service to the blind population. The introduction of the talking book in the Books for the Adult Blind project was revolutionary.

Talking Books

Development

In the early 1930s, less than 20 percent of the blind population had sufficient skill to make reading library books practicable and less than 10 percent sufficient to make it enjoyable. This was true largely because more than one-half of blind persons lost their sight after the age of fifty, when it is often difficult to learn braille due to loss of fingertip sensitivity.[48] AFB developed the talking book primarily with these people in mind.

In his 1877 patent application, Thomas Edison had listed recorded books for blind people as a potential use of his phonograph, but, seeing no commercial possibilities, he did not develop the idea further. In 1932, prospects were no better, due to the cost and bulk of records. Both could be reduced by recording at a lower speed and using more grooves per inch. Securing funds from the Carnegie Corporation and from Mrs. William H. Moore, Robert Irwin, director of AFB, set out to solve these and other technical problems, building on advances in movie sound tracks and radio electrical transcriptions that were not incorporated into popularly available records and players until 1948, after the Depression and World War II. Fortunately, Irwin was able to secure the services of an electrical engineer very knowledgeable about contemporary technology, Jackson Oscar Kleber. Under the guidance of these two men, AFB developed the talking book. It settled on about 150 grooves per inch, 50 percent more than commercial records had, as the optimum number to increase playing time for recorded texts and yet avoid two problems: picking up sound from adjacent grooves and excessively weakening the records, which would have to travel through the mails. With the cooperation of RCA, it developed a record material consisting mostly of vinylite to further increase durability and reduce weight. It adopted 33⅓ revolutions per minute (rpm) because motors at that speed were available for radio station use. Since ordinary phonographs for music records played at 78 rpm, AFB developed special low-cost machines, initially using standard parts, that could play its slower-playing records. A 60,000-word book could be recorded on eight or nine of these twelve-inch records, the diameter chosen because pressing dies were available and because it was the largest size that could be shelved conveniently.

AFB also developed sturdy mailing containers and appropriate labels—on one side in print for the librarian, giving title, author, copyright credit, narrator, the number of records in the book, and the number of each record; on the other side in braille for the reader, giving title, narrator, and page (side) number. It established its own recording studio and concluded that the best narrators were male radio actors. Women, whose voices reproduced less faithfully, were generally used only when the text required it. The narration speed was 160 to 170 words per minute (wpm). AFB paid its early narrators five dollars a side, and each side, playing about fifteen minutes, had to be recorded without errors, there being no way to "erase" mistakes.[49]

Introduction by the Project

Even before securing the Carnegie grant, the foundation had planned to supply talking-book machines to blind people and to try to have talking books included in the Books for the Adult Blind project. However, the majority of the blind population could not afford the machines, which were sold at cost, originally twenty dollars for the spring-driven model and thirty dollars for the electric model. Both donors and blind readers were reluctant to buy machines until records were available, and neither the Librarian of Congress nor Congress itself was interested in providing talking books until enough people had machines on which to play them. This impasse was resolved when, on the last day of its existence, March 3, 1933, the Seventy-second Congress passed a "clarifying amendment" to the Pratt-Smoot Act. This "permissive" bill allowed The Librarian "at his discretion" to use part of the customary Books for the Adult Blind appropriation to purchase talking books, with the verbal stipulation that no more than $10,000 was to be spent the first year, Fiscal 1934.[50] President Hoover signed the bill into law on his last day in office, March 4, 1933.[51] The Librarian of Congress declared that no talking books would be ordered until at least 300 machines were in the hands of blind readers. By spring 1934, that condition had been met through AFB's successful fund-raising campaign, and on May 4, 1934, Congress extended free mailing privileges to cover recorded books on loan to blind readers.[52]

The first talking-book titles Books for the Adult Blind ordered were the four Gospels, the Psalms, the Declaration of Independence and the Constitution of the United States, Washington's Farewell Address and his Valley Forge letter to the Continental Congress, Lincoln's Gettysburg Address and his first and second inaugural addresses, a collection of poems, Shakespeare's *As You Like It, Merchant of Venice, Hamlet,* and sonnets, and six works of fiction, the first produced being Gladys H. Carroll's *As the Earth Turns,* all in 100-copy editions. The very first talking book produced was Coleridge's *Rime of the Ancient Mariner*.

The distributing library at the Library of Congress, Service for the Blind, began talking-book service in October 1934. As soon as records were available for circulation, charitable people and groups in the Washington area began raising money to buy machines for blind persons who could not afford them. The acting director of the Braille Transcribing Service accepted responsibility for temporarily storing these gift machines (in the Library of Congress Mail Division), seeing that they were properly distributed, and recording their disposition. People volunteered to unpack, examine, and test the machines, as well as deliver and demonstrate them to blind readers, each of whom was asked to sign a simple agreement to return the machine when he or she was no longer able to use it.

By June 30, 1935, the Library of Congress distributing library had twenty-seven talking-book titles available for its 130 patrons with machines. This "turning point in library work for the blind"[53] presented problems for all the distributing librarians, who had no experience dealing with recordings and who needed to establish new policies—for example, some sort of certification, perhaps by AFB, that the patron had a talking-book machine before the library would provide recorded books. (AFB required certification by a physician before it would sell these machines.) Certification was necessary for several reasons: to protect the records from damage on an inappropriate machine and to assure that books recorded for blind readers were not made available to the sighted. Braille had presented no such problems. Questions also arose about the period of loans for talking books, special instructions to borrowers, examining returned records, cataloging, and shelving.

In Fiscal 1936, patrons were required to submit registration cards showing the models and serial numbers of the machines they used. The Library of Congress distributing library sent to its 315 talking-book readers Books for the Adult Blind–provided booklets of instructions and lists of ninety-one titles produced under the federal program, including Alexander Woollcott's *While Rome Burns,* narrated in part by the author. The ALA Committee on Work with the Blind met in May and suggested "ways and means" of handling the new medium, including "uniformity in reporting the number of talking-book records circulated, charging systems, and the feasibility of supplying with each box of records a sufficient number of needles, i.e., one steel needle for each side of every record."[54]

By April 17, 1935, 1,300 machines had been sold nationwide. The project was ordering 125 copies of each title, twice the size of its braille editions, and, word for word, talking books cost about twice as much as braille books. Clearly it was impossible to meet the growing demand for talking books without drastically curtailing the amount of braille materials produced. On June 14, 1935, with some 2,200 machines in use, an act of Congress authorizing an increase in the annual Books for the Adult Blind appropriation to $175,000 was approved; the additional $75,000 was allotted to talking-book production.[55] And AFB published the first (June 1935) issue of *Talking Book Bulletin,* later renamed *Talking Book Topics,* in mimeographed form, listing the recorded titles available and providing other information of interest.

Growth and the WPA Operation

During the Great Depression, few people could afford to buy talking-book machines for themselves or as charitable donations. However, AFB devised a way to use economic recovery legislation to further the talking-book program. In April 1935, it wrote President Roosevelt to suggest a Works Progress Administration (WPA) operation to produce the special machines required. They should remain government property, it said—the Library of Congress perhaps taking title—and be distributed to state commissions for the blind for loan to blind people. Following a meeting with Helen Keller and the president of AFB, President Franklin Delano Roosevelt personally expedited the operation, which, technically, did not meet the labor-intensive requirement of the administration. The Library was not eager to become involved, believing that the distribution of phonographs was an unseemly and alien function for a scholarly institution. Because the future of the talking-book program depended on the WPA operation, AFB offered to relieve The Library to whatever extent it desired "of all details connected with the distribution" of the WPA machines.[56]

On condition that lending agencies assume responsibility for repairs, The Library agreed, and on September 19, 1935, Roosevelt signed an executive order transferring $211,500 to the Library of Congress for the manufacture of 5,000 electric talking-book machines. The Library promptly appointed AFB as its agent to supervise both the manufacture and the distribution of the WPA machines.

In 1936, AFB began having *Talking Book Topics* typeset for the approximately 4,000 talking-book users.[57] By June 30, the first 5,000 WPA-produced machines had been distributed to state commissions for the blind and similar agencies. The receiving agencies paid shipping costs from the plant in New York City, thereby saving about $10,000 in WPA funds, enough to supply 200 additional readers with machines. With fewer machines than blind people, many agencies found it necessary to rotate equipment among interested readers.

The WPA machines were lent subject to conditions imposed by the Library of Congress. Each reader was required to agree to use the machine regularly and properly, exercising reasonable care; to make no repairs except with the permission of the lending agency; to surrender the machine if it was recalled by the agency or The Library and report any change of address promptly; and to provide the name of the library from which materials were borrowed during the preceding six months. To be eligible to borrow a government-owned machine, the reader had to have "a defect of vision which made it impossible or unsafe to read ordinary printed books," to be likely to give the records and the machine proper care, to have "sufficient intelligence to enjoy reading," and to be "unable, without undue [financial] sacrifice, to buy a talking-book machine."[58]

The demand for talking books was impressive. Lucille Goldthwaite reported that the New York Public Library's 1936 statistics showed "more reading [was] accomplished" with talking books than with braille; that is, the circulation of its 130 or so recorded titles exceeded that of its more than 4,000 braille titles.[59] Among the talking books produced the following year were several read in whole or in part by their authors: Representative Kent E. Keller's *Prosperity through Employment*, William Beebe's *Half Mile Down*, and Stephen Vincent Benét's *John Brown's Body*.

By June 30, 1937—twenty-one months after it began—the WPA operation had been allotted a total of $568,000 in Emergency Relief Appropriation funds, and 13,200 electric talking-book machines had been or were in the process of being distributed. About 2,100 spring-driven machines, with headphones instead of loudspeakers, were held up in production by the WPA operation due to delay in importing the motor required. In addition, about 3,000 machines not provided by federal funds were in use. However, for the 16,200 or so machines in the hands of blind readers, the Project, Books for the Adult Blind, had been able to distribute only 16,740 containers of talking books, representing some 145 different titles—little more than one container per reader. Congress appropriated an additional $100,000 for talking books in Fiscal 1938, bringing the total annual funding therefor to $175,000,[60] and allowing production of 12,813 containers of records—a number equal to three-fourths of all the previous stock—averaging about thirteen records each and representing almost 250 different books. Even though additional WPA funds allotted for more machines would shortly drive the number of talking-book readers over 20,000, the project expected the increased appropriation would allow it steadily to increase the proportion of talking books to users.

In Fiscal 1938, the project gained a second producer of talking books. In 1936, APH had obtained a ruling that allowed it to manufacture and distribute talking books in its textbook program for blind children, on the same grounds that they had been included in the Books for the Adult Blind project: books are books, whatever form they take. The following year, APH had begun distributing to schools such recorded titles as *Silas Marner, Treasure Island,* and *Gulliver's Travels,* produced entirely in its new studio and plant.[61] And the year following that, APH supplied thirty-two talking-book titles for the project, much to the satisfaction of both AFB, which could not produce as many recordings as were needed, and The Library, which made a conscious effort to divide the work between the two organizations in order to keep them competitive. The existence of a second source had made it necessary for the project to draw up specifications to maintain and, if possible, improve the quality of records. It invited suggestions from both its producers and consulted the National Bureau of Standards and other governmental agencies with technical expertise. Specifications were published in December 1937 with full awareness they would soon need modification.

In Fiscal 1938, the Books for the Adult Blind project produced, at a somewhat higher cost than usual, twenty-five plays recorded with full casts of actors, ranging from "Sophocles to Thornton Wilder and Eugene O'Neill, from Shakespeare and Goethe to the brothers Quintero and Bernard Shaw."[62] This practice was discontinued during the war and followed only sporadically thereafter. Such recordings made it easier for patrons to follow the action of the plays and represented a considerable technical achievement for AFB.

In 1939, AFB produced a recorded version of *Talking Book Topics*, historically the first recorded magazine, which it sold for one dollar a year on subscription.[63] For Fiscal 1939 and 1940, the WPA operation was allotted $301,000 for 4,600 electric and 900 spring-driven talking-book machines and other items, including 140,000 record envelopes and 9,000 containers to replace those worn out in service, which had formerly been purchased with Books for the Adult Blind funds. And Congress increased the annual Books for the Adult Blind appropriation for talking books to $250,000 beginning in Fiscal 1941,[64] during which the project instituted simple quality control procedures for recorded titles, requiring producers to supply test copies before it would authorize shipment to distributing libraries; and WPA-funded containers were for the first time used in shipping newly completed recordings to libraries, permitting the project to purchase more talking-book titles with its appropriation. During these years, works released narrated in part or entirely by their authors included *I Married Adventure*, by Osa Johnson; *The Woollcott Listener*, by Alexander Woollcott; *Mrs. Miniver*, by Jan Struther (in its entirety); *A Peculiar Treasure*, by Edna Ferber; *Buddenbrooks*, by Thomas Mann; and the poet's prologue to *Conquistador* and *Frescoes for Mr. Rockefeller's City*, by Archibald MacLeish, who was the Librarian of Congress at the time.

By June 30, 1941, after seven years of involvement with talking books, the Books for the Adult Blind project had provided some 540 recorded titles to distributing libraries, and almost 23,000 machines (3,000 of them spring-driven) were available for loan through lending agencies to the adult blind population. In 1941, the regionals served 15,600 patrons who read only talking books, 35 percent more than the total number of patrons who, according to an ALA survey, read embossed books borrowed from libraries for the blind in 1930.[65] In addition, more than 4,000 readers of embossed type were also using talking books.

Statistics

In 1937, the Project, Books for the Adult Blind, had undertaken to gather statistics from the distributing libraries. Previously, data had been collected by the ALA Committee on Work with the Blind, which helped draw up the new annual statistical form requesting all data formerly collected plus other highly useful information. In the process, the project tried to solve "certain vexatious problems in enumerative nomenclature" in order to make comparing statistics feasible.[66] It first published statistics for all the libraries in 1938: geographical areas and readers served (number, type of materials read, e.g., braille grade 1½ or Moon), collection, and circulation. Such data permitted both a more efficient distribution of materials, preventing the accumulation of inactive materials on library shelves, and a more realistic view of library activities. For example, in gathering statistics for 1938, the project asked the distributing libraries to supply, not the number of readers *registered* for each format, as they had the previous year, but the number of those who actually *borrowed* books during the year. Thus the project could report that the number of talking-book readers in 1938 was 15 percent greater than all the readers of embossed systems, whereas the previous year's figures had shown 35 percent more registered (but not necessarily active) borrowers for embossed books than for recorded titles. Some libraries had kept their patrons' files up to date; others still included readers registered as far back as 1927, 1913, or even 1905, whether or not they were active. Thus in Fiscal 1938, the Library of Congress distributing library and others had perforce to re-register their borrowers.

The 1938 data also showed that talking-book circulation had increased 67 percent and all circulation 12 percent over the previous year, and that 76 percent of talking-book readers did not read embossed type at all—the entirely new group of patrons AFB had envisioned. Circulation of embossed books had increased 5 percent over

1937 and 64 percent over 1929, two years before the Books for the Adult Blind project was established. These figures suggested that the introduction of recorded books did not cause a reduction in the reading of embossed books and that the circulation of more than 300,000 containers of talking books was "all clear gain."[67]

The growth in talking-book readership and circulation had been aided by the increased Books for the Adult Blind appropriation for recorded titles in Fiscal 1938. To meet the growing demand for records, AFB bought more studio equipment and began setting up units to process its master discs and to press records, beginning to phase out the contracting out of this work.[68]

Talking-Book Problems Solved

The years 1937 to 1939 saw the solutions to a number of problems resulting from the rapid-fire events of the previous years. With the Books for the Adult Blind project's annual appropriation at $175,000 for talking books, commercial firms had become interested in bidding on contracts. With thousands of machines in daily use, the project had to deal with growing repair problems. With more than $300,000 invested in records, the project had discovered that they were being damaged by the pickup arms on the first four talking-book machine models and by patrons who were not using a new needle for each side of a disc. And the project found it had a copyright problem.

Although most commercial record manufacturers discovered that they could not compete with the prices charged by the two nonprofit agencies that had been producing talking books, one made a determined effort to secure a bid, forcing the project into extensive correspondence and sample testing; finally, the whole matter was referred to the National Bureau of Standards. In the meantime, the project's recording schedule was interrupted. Although its annual funding permitted it to buy seventy recorded titles a year, in Fiscal 1939 it produced only thirty-five, in 140-copy editions. Congress added the amount not spent, about $72,000, to the project's appropriation for the next year and passed a bill signed into law June 7, 1939, declaring that the Librarian of Congress "shall give preference to non-profit-making institutions or agencies whose activities are primarily concerned with the blind, in all cases where the prices or bids submitted by such institutions or agencies are, by said Librarian, under all the circumstances and needs involved, determined to be fair and reasonable."[69] Among the reasons adduced for this requirement were the need to assure steady production by placing sufficient orders with nonprofit organizations and the possible difficulties obtaining copyright clearance if commercial firms produced talking books.[70]

During this period, 5 to 7 percent of commercial phonographs with electric pickups were expected to need repair in the first two months of use. It was fortunate that only 0.66 percent of the WPA machines needed repair in their first two *years* of use because in many areas few mechanics were experienced enough to make even minor repairs. Also, the cost of transporting machines and of the repairs themselves became a serious financial burden for lending agencies; several could not meet the costs involved. The WPA contract was therefore changed to include repair work; and, an act of Congress approved May 16, 1938, modified the postal laws to permit mailing talking-book machines, properly wrapped and labeled, to nonprofit agencies at one cent a pound for repair. (At the same time, it raised the weight limit for free mailing of talking books from twelve pounds to fifteen. Many books weighed slightly more than twelve pounds and had to be mailed in two containers, whereas the fifteen-pound limit accommodated all but the largest books in a single container.)[71] Many agencies took advantage of the lower postal rates—postage both ways ran less than one dollar—to send machines to the WPA operation for repair. There they were given a thorough examination by experts, and worn parts were replaced. This work became such an important function of the WPA operation that a portion of the allotted funds was specified for repairs in Fiscal 1940. From January 1, 1940, to June 30, 1940, almost as many parts were reconditioned as in the entire preceding year. About 19 percent of the repairs involved amplifiers, 36 percent involved motors, and more than 45 percent pickup arms.

The problem with the pickup arms had been recognized before 1940. In Fiscal 1938, AFB developed a new model machine with an improved pickup arm which offered superior performance characteristics. The new arm was better constructed, reducing the need for repair, and weighed almost 50 percent less than the previous arm, reducing record wear. It was made entirely by the WPA operation, whereas the previous arm had been bought. In addition, AFB developed a new AC motor weighing several pounds less than the AC/DC motor previously used and with fewer points where defects and wear could occur. With such a large and growing investment in records, 7,000 replacement pickup arms were included in the WPA Fiscal 1940 allotment for gradual replacement in older machines.

Record damage was also attributable to the failure of readers to use high-quality needles or to insert a new one for each *side* of a disc. Therefore, the WPA contract was expanded to include 11 million needles in Fiscal 1938 (as well as 2,700 electric machines and the completion of 2,100 spring-driven machines begun earlier, plus 500 more). The Books for the Adult Blind project undertook, through the WPA operation, to buy needles in bulk, have them counted into packets of forty by visually handicapped workmen, and ship the packets to regional libraries, which would insert a packet into each container sent to a patron. The WPA operation provided a total of 33 million needles in Fiscal 1939 and 1940.

The recorded format involved the Books for the Adult Blind project in copyright difficulties for the first time. With braille, obtaining copyright clearance had never really been a problem because it was not seen as a threat to profits. From the very beginning, AFB, which had secured copyright permission, and The Library were at pains to see that recorded materials were properly controlled. The first talking books all carried appropriate copyright notices, and the project's instructions for machine users warned that the records were to be used only by blind individuals, never for public performance or on the radio. However, the dramatic growth in talking-book users resulted in an increasing reluctance on the part of publishers to grant clearance, reaching the point in 1936 where the project was practically limited in its selection of titles to books published before July 1, 1880. This situation was particularly unsatisfactory because it deprived patrons of recent works on science and other disciplines and because many of the older readers, for whom talking books had primarily been created, had already read the early literature before losing their sight.[72] Praising publishers for the extraordinary cooperation that they had always displayed, the project pointed out that its talking-book editions were small, their distribution controlled, and its patrons not potential buyers of print books.

But basically the publishers were concerned, not about misuse of talking books for blind readers—none had been reported—but about establishing a precedent which might allow books to be recorded commercially without payment of royalties. Finally, on July 8, 1938, after consultation with The Library, its two producers (AFB and APH), and several print publishers, the Book Publishers Bureau distributed to its member publishers a plan of controlled distribution. It suggested permitting the use of copyrighted materials for talking books for blind people either for a nominal fee, to establish precedent in case commercial books followed, or without charge. The Library, which administers the operation of U.S. copyright law, agreed to act as clearinghouse for copyright permission and to report regularly to the bureau on the permissions sought and granted and the number of recordings made. Both APH and AFB agreed to conditions imposed on producers. In addition to their previous practice, they agreed to include "Solely for the use of the blind" on the label and narrate the same information, plus the publisher's name and "Recorded solely for the use of the blind, with the permission of the author and publisher" at the beginning of each record. The Library has never paid royalties.

But the key to avoiding copyright infringement in the use of talking books for blind readers was control of talking-book machines. The Books for the Adult Blind project was also responsible for knowing the location of the government-owned machines, and, with only one available for every six blind people in the country, for placing them where they would be well used. This required reports from the distributing libraries. In addition to submitting annual reports listing machines on loan in their areas, with the names and addresses of borrowers, the distributing libraries also had to make checks on usage and report the results, when appropriate, to the project, since its regulations required recalling a machine if the reader had not borrowed a talking book in the previous two months. Thus, by Fiscal 1938, the project was exercising a modicum of administrative control, setting policy and issuing regulations on machines which directly affected distributing libraries.

Narrators

Any discussion of the success of the talking-book program must recognize the role played by the narrators. Authors narrating their own works added prestige to the program. One of the factors contributing to the passage of the law giving preference to nonprofit organizations was their ability to attract authors and other famous people as narrators. For example, in addition to those already cited, Eleanor Roosevelt recorded the first chapter of *This is My Story* in 1938, while she was still the First Lady.[73]

Many luminaries of stage, screen, film, and radio also narrated talking books during this period, including Eva La Gallienne (Oscar Wilde's "Birthday of the Infanta" and "The Nightingale and the Rose"), Otis Skinner (selections from Shakespeare and from Booth Tarkington's *Mister Arnold*), Dame Sybil Thorndike (Arnold Bennett's "Letter Home"), and Alfred Drake (D. H. Lawrence's "Prussian Officer").[74]

But the high quality of the pioneering professional narrators was what ultimately made the talking book not only acceptable but useful and enjoyable to thousands of blind people. The first woman narrator, Ethel Everett, recorded more than 100 titles, among them all of Helen Keller's books. Terry Hayes Sales, who began narrating in 1937, ultimately recorded more than 300 books, and Alexander Scourby recorded more than 400 titles between 1937 and 1982 and was still on the active list. Scourby has narrated everything from the Bible to a book of limericks, from *Canterbury Tales* to *Jonathan Livingston Seagull;* but his most difficult assignment was probably *Ulysses*, which took 2½ months to record and required much research, since he had to know exactly what Joyce was saying in a very abstruse text.

Narrators must prepare for recording by verifying the pronunciation of words, analyzing the flavor and mood of the work, studying characters in order to project them accurately, working out dialects and inflection, and inoculating themselves against any humor. In the early days of the program, the demand was so great and the supply so short that patrons happily read whatever talking books they were able to get; requesting a particular book was out of the question. Today, patrons often express a desire to read anything recorded by a particular narrator. Indeed, readers often think of narrators they hear repeatedly as friends. And narrators often take a personal interest in their work. For example, when John Knight, who narrated the first talking book, died in 1946, he left The Library a bequest which was later used to build a tape recording studio at what was by then the Division for the Blind.

But basically, the success of the talking book—indeed, its very existence—must be attributed in large measure to AFB, which fulfilled the role envisioned for it by its founders by conceiving the idea, developing the record and playback equipment, persuading the federal administration to create a WPA operation and supervising the production and in many cases the repair of talking-book machines, producing most of the records, and founding *Talking Book Topics* to announce new titles.

Regional Circulation

In 1937, the Project, Books for the Adult Blind, imposed a geographical area of service for its materials on each of the twenty-eight distributing libraries, a decree particularly effective because of the popularity of talking books. From the beginning, geographical location had been a consideration in the selection of distributing libraries. In 1936, the project had tentatively restricted circulation of its materials to a specified area for each distributing library. But the older, established libraries, each with its own distinctive embossed collection, were not anxious to limit their circulation to specific service areas; they did not want to "abandon" widely scattered readers, even though all distributing libraries were receiving the same recorded and brailled materials from the project. That "no library wished to restrict an activity at once beneficent and appreciated, even in favor of possible expansion in a more restricted area"[75] is clearly illustrated by the response of the distributing library at the Library of Congress. Assigned an area consisting of the District of Columbia, Maryland, Virginia, and South Carolina, it promptly announced that it "hesitate[d] to disturb" its patrons in Florida, Alabama, North Carolina, Tennessee and West Virginia by "referring them to other libraries for material" and would therefore continue to serve them unless it interfered with service to those in its "legitimate territory."[76]

Yet, when the assignments, with minor modifications, were made permanent in 1937, the Library of Congress regional library, for one, was delighted with the increased efficiency of its circulation department due to decreased demand. Its collection consisted of almost 34,000 volumes, occupying space equivalent to that required by about 70,000 print books; overcrowding made it difficult to locate and properly reshelve books, and less circulation eased the problem. Noting that it had "always recognized the value of localized service," the regional reported that the assignment of "territories" had eliminated to a considerable extent "duplication and overlapping of services by different libraries, confusion in records, and unequal distribution."[77] It must also have simplified the project's record keeping, since machines were distributed by agencies serving a single state or part of one. The project also urged the regionals to restrict their activities to their assigned areas regardless of the source of the materials, in order to achieve greater economy in handling, record keeping, and mailing.

Braille

While the talking-book appropriations rose from $75,000 for Fiscal 1936 to $250,000 for Fiscal 1941, the appropriation for embossed materials remained at $100,000 throughout—for valid reasons. Press-braille materials cost less to produce than recorded ones and lasted longer; a talking book wore out after about seventy-five playings. Moreover, volunteers could braille but, at this time, not record materials on request. Further, raised type was an established medium and distributing libraries had established, if disparate and uneven, collections of it; many titles basic to a good collection were already available somewhere, although perhaps in obsolete type. But through recordings, Books for the Adult Blind was creating an entirely new library for an (almost) entirely new group of patrons, mostly readers who had lost their sight well after their school years. Strong braille readers, on the other hand, were fewer in number and typically were born blind or had lost their sight as children. Thus, the disparity in funding did not represent a real danger that talking books would supersede braille books. In fact, some books are poorly suited to recording—those depending heavily on charts, tables, diagrams, illustrations, or footnotes, and those with parts the reader will want to reflect on or refer back to. The true conflict in the 1930s, such as it was, developed entirely within the world of braille over uniform type and selection.

Braille Grades 1½ and 2

Standard English Braille, grade 2, was adopted in July 1932 by a conference of American and British organizations. It had been promoted by AFB and approved by committees representing American Association of Workers for the Blind and American Association of Instructors of the Blind. After the conference report was published on November 16, 1932, the Books for the Adult Blind project established the policy of ordering the vast majority of its embossed books in the newly adopted standard type for all English-speaking countries. American Revised Braille grade 1½ and English Revised Braille grade 2 shared the same alphabet and 44 contractions, but the latter type used about 140 additional contractions. Among other compromises, the uniform grade 2 incorporated all but the least useful of the English contractions. For example, in grade 1½, *nation* required six cells; in grade 2, only three: *n,* plus the two-cell sign for *ation*. Thus grade 2 was harder to learn but faster to read and less expensive to produce and store than grade 1½. The adoption of the uniform type did not automatically make grade 1½ obsolete. Anyone who could read grade 2 could also read grade 1½, but the reverse was not true. The Books for the Adult Blind appropriation had been a strong incentive to standardization, and, of course, the project hoped that further economies could be achieved through international exchange.

Even before the conference, however, the Braille Transcribing Service had stated that its policy would be "in the main to continue the training of transcribers in Braille, Grade 1½" because many readers would be slow in learning grade 2 and handcopied books in grade 1½ would be in "even greater demand" if the printing houses changed over to the new system[78]—which they did, except for elementary textbooks produced by APH and for works in Moon type. Competent volunteer transcribers could learn the new code if they wished, but they received little encouragement from the transcribing service. Its policy was ironic, given the fact that volunteer transcribers "more than any other one factor" had popularized grade 1½ when it was adopted as the uniform American type some fifteen years before.[79]

The Standard English Braille handbook prepared by a joint American-English committee proved inadequate and in 1934 a five-member committee of Americans, including the director of the transcribing service, was appointed to iron out the difficulties. That year the service was preparing a new manual based on the principles of grade 2 but covering only grades 1 and 1½. It was not until five years after the adoption of Standard English Braille that the transcribing service published an instructional manual for sighted persons wishing to learn to transcribe the new uniform type. The following year it published a braille version, produced by the Southeastern Pennsylvania Chapter, Philadelphia, of the Red Cross, for blind instructors and proofreaders, and a revised edition of the manual for grades 1 and 1½. The latter was revised again in 1940 and 1942.

Around 1934, the Books for the Adult Blind project began providing a bibliographic current awareness service in braille to its patrons through a monthly periodical circulated by distributing libraries. *Braille Book Review* (BBR) listed new braille books, both press-made and handcopied, giving the library location of the latter and descriptive annotations of the former. It also included reviews and other book news of interest to readers of embossed type. It had been started in 1931 by the New York Public Library and the American Braille Press in Paris as a braille monthly sold by subscription. When the press withdrew, the library continued publication on its own in dittoed form, beginning with the January 1934 issue, distributing BBR free for several months until the project stepped in.[80] With its February 1935 issue, BBR began listing new talking-book titles as well, and the August–September 1936 issue listed a braille catalog, available free from APH, of talking books provided by Books for the Adult Blind—apparently a braille edition of the project's *Talking Book Titles, August 8, 1934, to June 30, 1936*. In 1940, AFB took over publication of BBR, in mimeographed and brailled formats, the latter provided to distributing libraries by the project. Lucille Goldthwaite edited BBR from its inception until mid-1951. BBR was one of a series of magazines offered by the project in sufficient numbers to meet demand. The eight braille periodicals the project listed in 1935 included three, in addition to BBR, still provided by the Library of Congress program in 1982: *The Hampstead, Progress,* and *Braille Mirror*.

In 1936, the project distributed a union catalog showing the classification and ownership of some 6,000 handcopied books, mostly in grade 1½, in libraries serving blind readers in 1934, compiled by the Braille Transcribing Service. The manuscript had been transcribed on metal plates, interpointed braille, by volunteer stereotypists, and the service had proofed both the print and braille editions. Volunteers had printed and bound the 150 copies of the four-volume braille edition, which the Books for the Adult Blind project disseminated through the distributing libraries. The same year, the print edition was available from the project free to libraries on request. On-time delivery of this "monumental undertaking"[81] spoke well of volunteer services and may have led to the project's placing a large order with the Red Cross presses for back titles that year and one for new titles in 1938. Producing the union catalog was probably the transcribing service's "greatest single achievement."[82] As a companion piece to Lucille Goldthwaite's 1930 catalog of press-braille grade 1½ materials and its supplement, the Library of Congress regional library declared, the union catalog of handcopied books would "render its greatest service by eliminating the necessity of ever-increasing research and correspondence in response to inquiries as to material available" and it would be "invaluable" to students planning courses of study.[83]

Despite urging by the Books for the Adult Blind project that regionals restrict all services to their assigned territories, the Library of Congress distributing library continued to circulate its extensive collection of grade 1½ materials nationwide, lending mostly handcopied materials not otherwise available to patrons living outside its assigned area—almost 900 such patrons in 1939—as did other regional libraries. In order to promote circulation of its grade 1½ materials, the regional had, in 1934, issued a 1933 print supplement to its 1930 print catalog. Yet between 1932 and 1937, circulation of grade 1½ materials dropped by about 43 percent, whereas circulation of grade 2 materials tripled between 1934 (when the regional first reported such figures) and 1937, although the growth of its collection in grade 2 was only 75 percent greater than that in grade 1½. In Fiscal 1937, the regional declared it "welcome[d] additions of books in Grade 1½ Braille,"[84] and the next year it issued a four-volume braille catalog of its grade 1½ materials, embossed by the Southeastern Chapter of the American Red Cross in a twenty-copy edition and available on loan to readers nationwide. The catalog was expected to be useful for a long time inasmuch as relatively little material was being produced in grade 1½—only by volunteers and by APH for its elementary textbooks. The catalog, which contained acquisitions through January 1938, listed almost 4,500 titles, of which about half had been acquired since January 1930. Again circulation in this type decreased, by about 35 percent between 1937 and 1939. Yet a substantial number of readers preferred or could read only grade 1½.

Indeed, by 1939, the Books for the Adult Blind project was shocked to find how few readers had learned grade 2. In 1937, it had announced plans to publish, in collaboration with Goldthwaite, of the New York Public Library, a catalog of all press-braille books produced in the country, including earlier works in grade 1½. The next step, it had said, a "possibility . . . worth considering, would be a union catalog of all embossed literature, both press-made and handmade, at present available, with indication also of location of copies."[85] But, after producing grade 2 almost exclusively for six years, the project found its own 1938 statistics showing that one-third of adult American braille readers still did not read that grade. When Martin A. Roberts, director of the Project, Books for the Adult Blind, asked the 1939 biennial conference of American Association of Workers for the Blind (AAWB) the reason, he received not a direct answer but a resolution requesting The Library to produce more books in grade 1½.[86] This it stoutly refused to do, having no interest in "turning back the hands of the clock."[87] At the 1941 AAWB conference, nine years after Standard English Braille was officially adopted, Verner W. Clapp, administrative assistant to the Librarian of Congress, noted that "many leaders in Braille publicly express[ed] their superior facility" in grade 1½, that "the greatest volunteer source of books (which almost by itself maintained the flow of literature during the '20's) still" adhered to grade 1½ for the most part, and that AAWB and American Association of Instructors of the Blind had "never really given their stamp of approval or adoption" to the uniform type as their committees had reported in 1932. He wondered whether more readers might not have learned the new code if volunteers had not continued producing materials in grade 1½.[88]

When the Books for the Adult Blind project published its first cumulative catalog, *Books in Braille, 1931–1938*, in Fiscal 1939, it listed only books it had produced, arranged by subject, with explanatory notes and an index. The project sent copies to the regionals, requesting comments on the catalog's arrangement and the desirability of producing a braille edition for the patrons, who could not browse library shelves for themselves, to increase circulation of its older books. The response was favorable and the project's first braille catalog of its braille books was published in Fiscal 1940. Five thousand copies were distributed to the twenty-seven regionals.

Thus, by the end of the decade, adult blind readers could borrow from their regional libraries magazines announcing new press-braille and handcopied books, catalogs of older handcopied books produced before October 1934 and available from various libraries across the country, and catalogs of press-braille books produced by Books for the Adult Blind between July 1931 and June 1939 and available from regional libraries. Adults who had learned grade 2 could read any of these materials; those who knew only grade 1½ received little benefit from the federal appropriation.

The official adoption of Standard English Braille clearly had not meant its immediate practical implementation. The Braille Transcribing Service was concerned that many volunteers would not want to learn the new, more complex code; also, clarifying the rules and writing a new training manual took time. Furthermore, many a home teacher argued that newly blind adults who had difficulty mastering braille found grade 1½ easier to learn than grade 2 because the system was simpler. And they found handcopied braille easier to read than press braille because the dots were firmer and the pages not interpointed. Some blind people went on to learn the new standard type, others stopped reading, many began reading talking books, but many continued reading grade 1½.

Similarly, it was natural that distributing libraries with large and distinctive collections in superseded type should wish to continue circulating them to adult patrons who wanted to read them, wherever they lived. Although braille grade 1½ had been adopted twenty years before, the 1938 statistics gathered by Books for the Adult Blind showed regional libraries housed some 21,500 volumes in raised types other than braille or Moon, such as New York Point, but circulated only 800 volumes during the year. This represented a rather poor use of limited shelf space. The Library of Congress regional was still circulating books in New York Point as late as 1941, when demand fell so low that it decided not to bother publishing statistics on it any longer. But the major factor in both the persistence and the decline of grade 1½ was selection.

Selection

The Braille Transcribing Service repeatedly pointed out that it neither competed with nor overlapped any other agency because it met "special needs for material . . . not supplied through regular channels."[89] For example, APH provided textbooks for students up to college level; the volunteer transcribing service provided leisure and collateral materials for children, such as short stories and Girl and Boy Scout handbooks, as well as textbooks for college students.

For many years, volunteers had transcribed textbooks for college students of French, Latin, German, Spanish, Italian, English, law, history, philosophy, economics, literature, mathematics, psychology, and other subjects.[90] The first brailled copy of *The Canterbury Tales*, *The Odyssey* in Greek, and *Les Miserables* in French were made by hand.[91] The student requesting materials provided the print copy and used the transcription in loose-leaf form, returning it to the transcribing service for binding and distribution to libraries. Many books went to the Library of Congress. At the sixteenth biennial convention of American Association of Workers for the Blind in 1935, the acting director of the Braille Transcribing Service proposed that such materials be gathered into a single "students' library," independent of all other libraries and freeing their staffs and shelf space.[92] In 1936, the Library of Congress distributing library provided a nucleus for the students' library, eighteen handcopied titles (ninety volumes) of foreign-language and history materials. Later APH assumed responsibility for the collection. In most cases, after the requesting student finished with the loose-leaf handtranscription, it went to APH for binding, cataloging, and circulation to other students. Handtranscriptions placed in local libraries were supposed to be reported to the Library of Congress. The students' library was relocated in The Library in 1948.

In 1937, the Books for the Adult Blind project entered the field of postsecondary textbooks. It undertook to produce press-braille limited editions of thirteen legal textbooks, distributing one copy each to one regional in each of the ten judicial circuits and notifying the 130 blind lawyers known to AFB, as well as the distributing libraries, state commissions for the blind, braille magazines, and various law associations, schools, and libraries of the fact. The project judged the experiment so successful that it considered expanding the concept to other fields, such as sociology, economics, music, political science, anthropology, natural science, pure science, and the fine arts. By 1939, it had produced nineteen law titles, placed reprints of ten in some twenty law schools, and ordered copies of the remaining texts for them. The project took the position that, while such works were of "less than very general interest,"[93] they "appear[ed] to meet exactly the requirement which commended the establishment" of Books for the Adult Blind to Congress.[94] That is, their cost was prohibitive to other agencies, including volunteer agencies.

Although the project said it tried to maintain for the general reader a "fair proportion between those works which are of established worth and informative" on the one hand and purely recreational reading on the other, it also stated flatly that its "conscious endeavor" was to create for the blind adult reader "out of the Government funds . . . available (but not necessarily of indefinite continuance) a library of reading whose value shall not diminish in the years to come, but which shall prove to be of enduring worth both for his instruction and his recreation."[95]

Since 1932, distributing librarians had constantly asked the Books for the Adult Blind project to produce more light reading. The librarians argued that their patrons needed "a larger percentage of books of a popular nature than the average library" offered because they could not buy such materials; patrons needed and wanted the "best current literature," bestsellers, mystery stories, westerns, romances, and popular nonfiction to keep "abreast of the times."[96] Indeed, back in the early 1920s, when the Veterans Bureau provided "the only instance . . . in which librarians were given an opportunity to exercise consistently their judgment in [braille] book selection," they chose "interestingly written non-fiction" and a "predominance of light fiction."[97]

A 1939 survey of subscribers to the braille *Reader's Digest* confirmed their judgment. The 1,250 respondents were not representative of the general blind population in that they were younger, better educated, and better employed. They definitely were readers: nearly one-third had read ten to twenty-five books in the previous six months and almost as many had read one to nine. Of the ten most popular books with this "superior" group, three were bestsellers of long standing and only two were nonfiction, both highly readable and not at all scholarly. Of the titles the group wanted to read, 70 percent were fiction, whereas only one-third of the entries in the 1940 Books for the Adult Blind catalog were fiction. These readers wanted stories, whether fact ("readable nonfiction") or fiction, books of current interest to sighted people, and books on current topics.[98]

It was this sort of reading that volunteers provided. The transcribing service made an effort to have books people were talking about transcribed "as soon as possible after the print publications."[99] Its volunteers also produced books on such subjects as massage, gardening, etiquette, child care, diet, and health. In its 1934 report, it mentioned books on handicrafts, cooking, salesmanship, and insurance, as well as books in grade 1 for beginners. In contrast, the annual report of the Books for the Adult Blind project that year proudly mentioned a "fine array of biographies," particularly singling out a "substantial addition to Plutarch's Lives" which completed its production of that work.[100]

However, the project had its own survey to support its selections. In 1936 it had questioned about 1,000 patrons, inviting them to suggest specific titles or to state their reading preferences generally. With "very few exceptions," these readers had expressed an interest in "works of a serious character in the fields of the classics, philosophy, sociology, economics, science, history, belles lettres, art, literary criticism, and established works of fiction."[101] Thus the Project, Books for the Adult Blind, considered "itself to have received a mandate, from the blind as well as from Congress," on selection policy. It believed that it was giving readers "what they want[ed], not by giving them ephemeral successes . . . , but by selecting for them, at their own suggestion and with the aid of experienced librarians and bookmen, the best of current production, together with a constant increment drawn from the literary treasures of the past."[102]

No doubt the project's selection policy was determined in large part by the Librarian of Congress himself, Herbert Putnam, a distinguished Phi Beta Kappa scholar, lawyer, and innovative librarian. His successor wrote that the "whole fabric" of the organization he inherited from Dr. Putnam "depended from the Librarian as the miraculous architecture of the paper wasp hangs from a single anchor."[103] Thus, Dr. Putnam made the final selection from a list of titles appropriate for brailling or recording submitted to him. In explaining its selection policy, he compared the project to a public library in two ways: both had a responsibility to "guide the taste of their readers," and, given limited and public funds and a diversity of tastes, both had to compromise on selection.[104] His concerns were not only intellectual but practical, given his apparent conviction that Books for the Adult Blind was a short-term project. Testifying before a congressional committee, he noted that, when interest in ephemeral works waned, the master plates and discs became worthless, whereas those for "more permanent literature" could generate additional copies as needed for future readers at relatively low cost.[105] In contrast, volunteers were concerned with meeting a reader's immediate needs.

The conflict, such as it was, was a draw: popular titles more like the volunteer transcribing service's would eventually predominate in the collections of the Library of Congress program for blind readers, but the vast majority of handtranscriptions would soon be produced in the more concise grade 2 braille. The need for an efficient uniform type was paramount.

New Responsibilities

In the early forties, the entrance of the United States into World War II and the comprehensive reorganization of the Library of Congress under a new Librarian had significant effects, direct and indirect, on The Library's services to blind readers.

Braille Transcribing

Red Cross sponsorship of the Braille Transcribing Service, which began as a result of World War I, ended December 31, 1942, when that organization assigned priority to World War II relief work. The Library of Congress assumed full responsibility for volunteer transcription as of January 1, 1943, in order to supplement and complement the supply of mass-produced books. The service, which had been headquartered in the Library of Congress regional, became the Braille Transcribing Section of the Project, Books for the Adult Blind, renamed the Division of Books for the Adult Blind, "thus bringing together the two main sources of adult braille literature in this country."[106] Some chapters had disbanded when the Red Cross announced its withdrawal, well before the end of 1942, others continued transcribing under the new arrangement, and some individuals began working directly with the division without local affiliation. Before April 1943, new transcribers and proofreaders were certified by the Red Cross, thereafter by the Library of Congress.

The division made a number of changes in policy. It announced that transcribing in grades 1 and 1½ would be "discontinued as soon as reasonably possible."[107] Single-copy handtranscription in Standard English Braille, grade 2, of general-interest materials, students' books, and materials for professional people and other individuals would continue. The grade 2 training manuals, which the Red Cross had published, would be used until the division could produce its own manual combining grades 1½ and 2 in one course of study. The division found that the number of undistributed copies of the grade 2 training manual the Red Cross had given it was inadequate and arranged to have a 500-copy edition offset-printed. Thus ended another rearguard action in the battle of the types.

In addition, with the volunteer book review committee of the Braille Transcribing Service no longer in existence, a new selection policy was instituted. No longer would lists of approved titles be circulated for volunteers to choose from. Instead, transcribers and readers were to submit suggestions for consideration by the chief of the transcribing section for suitability, copyright date, size of print, number of pages, illustrations, charts, and probable demand. Titles recommended by the chief would go to the director of the division, who would consider factors relative to their being press brailled. Once a title was approved for volunteer production, the division would secure copyright clearance and notify the person who had suggested it. Placement—by Fiscal 1946 only in regional libraries—was guaranteed only for books authorized by this procedure. Volunteers were encouraged to meet all financial costs involved in their handtranscriptions—about twenty-five dollars—because The Library was able to pay for paper, shellac, and binding only under specified conditions and for proofreading not at all. The new transcribing section had a staff of four—the chief and the instructor/proofreader, both blind, were assisted by two clerks.

The division thus could exercise better control over selection of titles, avoiding "unfortunate duplication," and also produce inexpensive limited editions of such specialized books as *Osteopathic Principles in Disease*, a work already ordered press brailled. Limited editions were particularly important with regard to vocational and occupational literature for both civilians finding more acceptance in the workplace and returning war-blinded servicemen. Small editions were also appropriate for such works as a "scholarly history, or a long literary classic, of limited popular appeal, but essential to the serious-minded reader, and to a basic library collection."[108]

Wartime Measures

WPA funding for the manufacture of machines and parts expired as of June 30, 1942, and, of course, was not renewed. The $1,181,000 allotted to the WPA operation since 1935 had resulted in the production of 23,505 talking-book machines (3,000 of them spring-driven), 69.5 million needles, 7,000 pickup arms, 130,000 record envelopes, 40,500 record containers, and an unidentified number of replacement parts. Some undistributed machines were sent to state lending agencies during the war; but, because the country's resources were committed to the war effort, no additional machines were acquired until

1946. Shortages of copper, wax, zinc, and other priority materials meant the production of smaller editions of recorded titles—42 percent fewer copies in 1943 and 46 percent fewer in 1944 than in 1942. However, AFB was allowed to make 30 million needles so readers could at least continue using the machines and records available.

Thousands of older machines in almost daily use for years were due for replacement. The temporary solution was extensive repairs—which had been covered by the WPA contract. An act of Congress approved October 1, 1942, increased the Books for the Adult Blind appropriation by $20,000 beginning in Fiscal 1943 for the repair and maintenance of Library-owned talking-book machines.[109] On the basis of competitive bidding, the division awarded a contract to AFB, which expanded its own shops for the repair of machines it sold in order to handle the additional work. It began operations on January 10, 1943. So many machines requiring repair had accumulated in the state lending agencies that the 1942 statistics showed a temporary decline of almost 1,000 readers. AFB continued to repair talking-book machines for the division until the end of the war.

On June 13, 1944, the division's annual appropriation was increased to $500,000, $400,000 of which was for talking books and the repair, maintenance, and replacement of talking-book machines.[110] The increase was needed because of the division's broader scope of activities, particularly the provision of services to the military personnel blinded in World War II.

War-Connected Service

The Pratt-Smoot Act had specified preferential treatment of honorably discharged U.S. military personnel blinded in the service of their country. As part of its contribution to the war effort, The Library loaned duplicate braille books to India, where they were used in the training and rehabilitation of blind American, British, and Indian soldiers, and to Canada, whose British sources had dried up. Talking-book records and machines and braille books were sent to American prisoners of war in Germany. Early in 1944, the division made arrangements to provide talking-book records and machines to rehabilitation centers for war-blinded servicemen. By July 1945, about 200 machines were in use at such centers and at nine other army hospitals where temporarily or permanently blinded servicemen were being treated for other injuries. Through special arrangements made by the division, each patient could have a talking-book machine waiting for him when he was discharged. By July 1945, about sixty such deliveries had been made and 500 new machines had been set aside for others. More would be needed, since more than 1,000 servicemen had been blinded in the war. The talking book was "one of the most effective and immediately available aids to the rehabilitation of the war-blinded."[111]

The war also affected the selection process. Most important, it drew attention to a third kind of blind reader by creating a "small but extremely important group," the new war blind, young adults who needed gainful employment.[112] Almost no vocational materials had been recorded. Volunteers could transcribe single copies of braille materials, but the veterans' preferred medium was the talking book. Although its funding was not sufficient to allow it to satisfy what amounted to individual needs, the division did produce braille books on radio, beekeeping, beef production, poultry husbandry, and rabbit raising, with blinded veterans specifically in mind. Also, light recreational reading generally not considered the sort to interest older patrons was of great therapeutic value to the hospitalized blinded veteran. In addition, during the war, the division recognized the need to keep the blind citizen apprised of current world events. It produced "important and timely books dealing with the history, causes and problems of the . . . world crisis," as well as War Imperative Books chosen by the War Book Panel of the Council of Books in Wartime.[113] With the sometimes mutually exclusive selection criteria of "timelessness and timeliness,"[114] the latter was beginning to weigh as heavily in the scales.

Consolidation

Between 1939 and 1944, under a new Librarian of Congress, Archibald MacLeish, The Library was undergoing a gradual but complete reorganization on the basis of function. In one stage of that process the Reference Department had been established in 1941, in effect combining everything that did not involve processing, administration, copyright, or law. In this interim phase, the department's structure did not reflect its functions: each of its various reading rooms handled reference work, book selection, book services, and custody of books on its shelves. The Division of Books for the Adult Blind became part of the Reference Department and was given its first full-time director. The Library of Congress regional was also part of the new department, "nominally a section of the Reading Room Division although actually quite autonomous in its operation."[115] In May 1943, all services for the blind at The Library were moved to the third floor of the Annex. Their physical proximity, however, did not mean they functioned as a single administrative unit. In its new location, the regional again had adequate room for its collection, which was housed on the floor above. Its growing collection continually presented a storage problem, and The Library had no authority to destroy the many little-used embossed books regional libraries could not accommodate.

In March 1944, the Reference Department was reconstructed in terms of its principal functions—custody, circulation, and reference. The Reading Room Division was dissolved, and custodial and circulation responsibilities previously scattered among the reading rooms and the special divisions were unified in Reference's Circulation Services, under whose Loan Division the regional came. The book selection and reference functions of the Division of Books for the Adult Blind remained in Reference, becoming the responsibility of the new Public Reference Service. Its fiscal and administrative sections, which handled details concerning the purchase and distribution of braille and talking books and talking-book machines, were temporarily transferred to the administrative offices under the chief assistant librarian, whose executive assistant was named acting director when the division's first full-time director resigned in 1944. The Braille Transcribing Section remained a separate and distinct unit within the division, performing its customary functions.

After almost two years under part-time administrators during the war, in January 1946, the division was given another full-time director, one who had served as head of a network of army libraries. He was the first director who was not previously on the Library of Congress staff.

The division's new director was impressed by the "diversity of activities" involved in conducting its half-million dollar program, "ranging from professional library techniques such as book selection . . . through complete publishing programs in special media, experimental research in sound reproduction systems, studio recording problems, [and] manufacture of electronic equipment," to "cooperative library planning, publicity, public relations, finance, personnel and administration."[116] His annual report to the Librarian of Congress noted repeatedly that this very diversity and the organizational pattern needed to carry out the work made it difficult to write an annual report under such typical library headings as "Acquisitions" and "Preparation of Materials" in the form required for The Librarian's own annual report to Congress.

In addition, he remarked the incongruity of The Library's major activities in "Service of Materials" for blind readers being reported by the Library of Congress regional as a section of the Loan Division, while the Division of Books for the Adult Blind reported national figures, including the regional's. Noting that library services for blind people were "scattered within the Library of Congress and locally where historic accident had dropped them," and therefore "numerous opportunities for service were not fully explored or developed," he called for a "consolidation of all work for the blind at the Library of Congress" as well as at the National Library for the Blind, Inc. (NLB), in Washington, D.C., into "one well planned and integrated organization" with a larger budget.[117] Both NLB and the Library of Congress regional served the District of Columbia, Maryland, and Virginia; each served one of the Carolinas.

On August 6, 1946, President Harry S Truman signed into law a bill authorizing an increase in the division's appropriation from $500,000 to $1,125,000, doubling the amount that could be spent for braille materials, to $200,000,[118] and making possible an "urgently needed expansion."[119] New talking-book machines were desperately needed to replace the 23,500 old WPA machines and to serve new patrons. The division wanted to double or even triple the number of readers served and provide a collection comparable to "general libraries in the United States."[120] As they had with the braille library collections before the Books for the Adult Blind project was established at the Library of Congress, patrons read what interested them in the talking-book collection—consisting of fewer than 2,000 titles after ten years—and then stopped borrowing records, giving up their machines. If the division could produce more titles with broad appeal, the demand would increase substantially but would be limited by the number of talking-book machines available. The division felt the answer to the acquisition problem was a new recording medium that would reduce the size and cost of talking books.

The expanded program included the requested consolidation. On September 16, 1946, NLB voted to accept The Library's invitation to liquidate and merge with the division, and, on October 1, the Library of Congress regional was transferred from the Loan Division to the Division of Books for the Adult Blind. On October 16, the name of the division was changed to the Division for the Blind. Consolidation was expected to give the division insights into the highly specialized nature of the regionals' lending service and to effect economies.

The division was given enlarged, unified quarters in the main building for offices, the testing studio, and experimental research workrooms. The stacks and the staff engaged in circulation and maintenance of the collection remained in the Annex. Of the approximately 25,000 volumes and containers the merger brought, more than 4,600 braille volumes, mostly single-copy editions, and 1,100 containers of talking books were added to the collection. The only books kept were those that were in good condition, not duplicates of the Library of Congress regional's holdings, and of literary and scholastic value or by an author not represented in its collection, plus braille music scores, current embossed magazine subscriptions, and all books in foreign languages. The surplus NLB books and some eight tons of surplus braille, Moon, and talking books weeded from the Library of Congress regional collection were shipped to the American Foundation for the Overseas Blind, benefiting blind people in other nations and promoting international good will. Five members of the NLB staff, all blind, were given responsibility for circulation. This assignment necessitated the brailling of labels for some 32,000 volumes and containers, plus whatever readers' lists, catalog cards, and other records had not already been brailled. Thus the merger, which added North Carolina to its territory, doubled the Library of Congress regional's staff, relieving its overworked personnel, who had been unable to check returned materials promptly. It later became necessary to enlist volunteers to assist with the slow job of converting labels and records to braille.

The merger provided another benefit to the Library of Congress. The director of NLB suggested to persons who had been supporting his library financially that their continued contributions would be helpful to the expanded program at the Library of Congress. As a result, a gift fund was established; by July 1947, twenty-six contributions were received. When the merger was legally complete in June 1951, NLB's capital assets of more than $36,000 were placed in the National Library for the Blind Gift Fund. The Library committed itself to ensure the continued employment of NLB's staff, all of whom were blind, and to replace them with qualified blind applicants, if possible, when their positions became vacant; in addition, they were given federal retirement rights for their years of employment at NLB.

Consolidation increased the size of the division's staff during 1946 from twelve to twenty-three. The expanded program included upgrading and further enlarging the staff. With circulation now added to the production and distribution of talking books and brailled books, both handmade and mass-produced, and the distribution of talking-book machines, the division was reorganized by function into four major units, in the expectation of a staff of forty permanent employees the following year. However, out of a total budget of $1 million for Fiscal 1948, Congress imposed a $50,000 ceiling on personal services,[121] which effectively limited the staff to eighteen, plus temporary workers for special projects. Thus, the staff was unable to perform all the functions planned in the reorganization, such as providing an extended field service program to assist regional librarians, publicizing the program, establishing a union catalog of materials for blind readers in this country and abroad, and expanding the volunteer program to include recordings.

Eligibility

After the war, the poverty test for borrowing talking-book machines was dropped.

In 1951, the eligibility requirement for service from the program was changed to coincide with that used in administering relief in most states: central visual acuity of 20/200 or less in the better eye with correcting glasses or a field of vision which at its widest diameter subtended an angular distance of no greater than twenty degrees.[122]

Volunteers

At the end of World War II, the division was thinking about meeting the textbook needs of blind veterans continuing their education under the G.I. bill and those of other blind college students by organizing two elite corps, one of "recordists" and one of braillists. However, this plan was never implemented, and by Fiscal 1948 the division was referring blind students to groups of volunteers who could do the work.

Volunteer-produced recordings had been foreseen by Robert Irwin at the beginning of the talking-book program in 1935.[123] It was not until 1947, however, that equipment and motivation coincided and an organized movement began, like that of Red Cross braillists after World War I, in response to veterans' need for educational materials. Using commercial equipment, such as the SoundScriber or the Gray Audiograph, various groups across the country began producing textbooks on plastic discs about six or seven inches in diameter, with about twelve or fifteen minutes' reading time. This was instantaneous recording on embossed discs. The quality of reproduction was not high, but the recordings were a more practical solution than personal readers, who were often hard to find and whose time was limited. Such recording services proliferated chaotically, with independent groups using different and incompatible equipment, techniques, and standards, and sometimes recording the same texts.

Organized as a national coordinating body in 1950, the National Committee on Special Recording was not successful in persuading either the AFB or the division to take over its proposed responsibilities. A schism within the committee resulted in its demise and the establishment in 1951 of the National Committee for Recording for the Blind, Inc. (RFB), whose purpose was not only coordinating existing groups but also establishing new units around the country, using a New York Public Library group as both model and laboratory The new committee obtained a three-year annual $25,000 demonstration grant from the Ford Foundation and technical services and assistance from AFB, mainly the use of ten linked machines that could turn out simultaneous copies of a single master.[124] The chief of the division served as advisor and liaison between The Library and the committee; other than strongly urging recording on tape in soundproof studios and subsequent transfer to disc, he left guidance on recording techniques to AFB, which also advised the committee.

The division limited itself to helping the committee establish a catalog of titles already recorded and obtain copyright clearances. It also agreed to consider establishing a centralized clearinghouse in The Library for requests for specially recorded materials so that titles previously recorded would be readily available and new titles could be assigned for recording without delay. This arrangement paralleled the role the division performed for volunteer braille transcribers.

The division was also improving its work with braille volunteers. It began providing print books, paper, and money for proofreading and, later, for binding and shellacking books authorized by the division for handcopying. And, after three years of discussion, preparation, and joint editorial work with APH, it published a new manual for Standard English Braille, which sold at one dollar a copy. In Fiscal 1951, an assistant instructor was appointed for transcribing and proofreading courses so that after March of that year no applicants were refused instruction because they could not find it locally. Work was begun on a new proofreading manual. The division met with leaders of volunteer braille organizations and reached agreement on standards for handtranscriptions, the way books were selected and assigned for handcopying, and the importance of a union catalog of handcopied materials.

In addition, in December 1952 The Library sponsored a conference of volunteers active in recording and transcribing books, attended by 125 people from twelve states, the District of Columbia, and Canada. By then RFB had seven units in operation, including one at Oak

Ridge, where scientists recorded textbooks in physics, chemistry, biology, and other sciences; and it was expanding its program to include "good books for . . . entertainment and enlightenment," checking with the division to avoid duplication. RFB was in effect providing a library service with more than 400 books that had been produced on demand by volunteers. A number of recording groups presented papers at the conference. Volunteer Services for the Blind (formerly the Southeastern Pennsylvania Chapter of the Red Cross) reported that members recorded books at home for the permanent libraries of students who requested them, rather than duplicating and circulating them. The American Red Cross Chapter of Newark, New Jersey, reported that its activities included recording materials for students as young as fifth grade. The chapter at Elizabeth reported incorporating braille supplements for such things as maps, and recording New Jersey's new fire insurance rates for two blind salesmen. Members of braille groups spoke at the conference also. Volunteers Service for the Blind, Inc., had trained specialists in math, music, and foreign-language transcription and had organized transcribing groups at the Eastern State Penitentiary of Pennsylvania and the New Jersey Reformatory. The Braille Committee of Passaic brailled all the textbooks needed by blind New Jersey high school and college students.[125]

The conference's resolution called for The Library to provide a central depository for little-used materials, a central mechanism for clearing all titles before embossing or recording, instruction in braille music notation, an errata list and an index for the 1950 *Manual of Standard English Braille,* and a list for blind people of all volunteer groups who would braille or record materials for them.[126]

One of the obstacles to the division's deeper involvement with volunteer recording groups was the fact that standard talking-book machines could not satisfactorily play embossed discs. In Fiscal 1951, the National Bureau of Standards had surveyed for the division the work done on these discs at Volunteer Services for the Blind and the New York Public Library. Its conclusion was that it was essential to develop an acceptable embossing system and, if possible, improve the performance of commercial disc-embossing equipment, as well as adapt talking-book machines for playing as many different types of embossed discs as possible. In Fiscal 1952, the division field-tested machines adapted for playing embossed discs by installing on model A machines a new pickup arm devised by AFB and approved by the bureau. This arm pivoted freely and had a crystal cartridge mounted on a rubber hinge at its end. If the arm proved satisfactory, the division planned to buy enough to meet students' needs. However, by the end of Fiscal 1954, it was apparent that the new tone arm did not reproduce standard talking books with maximum quality and, in fact, damaged them. The division therefore limited the number of machines equipped with the arm to 1,000, believing that to be adequate for student use. Of course, volunteers were producing materials of state or local interest, not just textbooks, and the division was left with the question of whether such materials justified providing more machines with the special arm.

Selection and Access

In 1946, the division conducted three studies of patrons' reading tastes. Two were based on a random sample of talking-book machine agreements (on which reading preferences were given), divided into veterans' and general users'. The third was based on 207 voluntary letters received in response to an invitation the division placed in braille magazines for braille readers to state their preferences. These represented the three basic groups of patrons: skillful braille readers, the young war-blinded, and older talking-book readers. The preferred nonfiction subjects for braille readers were vocational materials and biography. The nonfiction categories most preferred by talking-book readers were travel, current affairs, and biography. Some marked differences in talking-book readers' tastes appeared. Compared with the general population of talking-book readers, 100 percent more veterans wanted vocational materials, roughly 75 percent more wanted detective fiction, and 55 percent more wanted westerns.

The division modified its selection process by hiring a professional librarian as selection assistant in 1946 and bringing readers and the regional librarians into the selection process on a routine basis, through the Readers' Advisory Group and the Librarians' Advisory Group. Although the recorded collection still lacked a large number of classics, most of them had been brailled; therefore selection emphasis for the braille collection began to fall on books of current worth. Choosing one book over another was the responsibility of the selection section. The selections assistant evaluated reviews, examined texts, and compiled a quarterly list of titles under consideration, which was then sent to all members of the advisory groups for comments. Guided by the majority vote of the groups, the Library of Congress made the final decision. In Fiscal 1948, regional librarians were given the opportunity during the selection process to indicate the number of copies they wanted above the basic allotment.

In March 1949 and May 1950, the division issued classified annotated cumulative catalogs of all press-braille and talking books, respectively, produced before December 31, 1948—about 3,170 press-braille titles since the program's inception and about 1,400 talking books since August 1, 1934. And, in Fiscal 1953, when AFB was seriously considering discontinuing publication of *Braille Book Review* and *Talking Book Topics* as an economy measure, the division began underwriting the entire cost of producing these periodicals vital to its service.

Machines

The division set up an automated inventory control for talking-book machines. The fifty-five state agencies submitted new agreement forms on IBM cards for all the machines allotted them. Verification and reconciliation of discrepancies established a basic inventory in Fiscal 1949.

When AFB wanted to withdraw from the centralized repair project after the war, the division considered bids from commercial radio-phonograph contractors located within fifty miles of The Library and transferred operations in 1947. In Fiscal 1949, 75 percent of the machines sent in for repair were so worn that it was judged less expensive to replace them; the division cannibalized 900 such machines that year. But 10,000 old machines were still in use by June 30, 1950.

The major problem of this period was the production of new machines, an entirely new field for the division. It had hoped to take advantage of technical advances made by the military during the war. On May 15, 1945, it had convened a meeting of experts from other governmental agencies, talking-book producers, and members of the Office of Scientific Research and Development's Committee on Sensory Devices. Dr. George Corner, chairman of that committee, declared that it might eventually help with a new medium for recorded books, but its immediate concern was the modernization of the existing talking-book machine, a project which was within the competence of the recording industry and required no basic research.[127]

A questionnaire survey of a cross-section of talking-book users conducted by the committee in the mid-1940s showed the problems with machines in use. They broke down too often and could not be repaired locally because their parts were nonstandard. A new needle was required for each side of a record, and needles were difficult to change. The tone quality was poor by contemporary standards. Readers who did not have them wanted two-speed machines (78 and 33⅓ rpm) so they could play commercial records and talking books on the same phonograph. The result of the meeting had been a list of features desirable in the new model. New features included a permanent needle, if possible; a tone arm that was automatically put in place on the record via a push-button control; improved tone quality; an eight-inch speaker in the lid to avoid picking up motor vibrations; a portable carrying case; and standard parts—all features that were available commercially. The meeting recommended keeping two-speed turntables, magnetic pickups, and earphone jacks.[128]

Apparently with no clear idea of whether it wanted to develop its own equipment, the division bought 550 machines from AFB when it resumed production of its last prewar model. However, a better machine was possible and necessary, and the division decided to develop a "truly satisfactory postwar model."[129] Before the war AFB had, in effect, formulated the specifications for talking-book machines and needles, as well as records. In Fiscal 1947, the division bought 3,550 machines produced according to its own specifications. Of these, 550 were set aside for veterans. The following year it asked the National Bureau of Standards to write specifications for a new model, R, and bought 7,500 of them at half the per-unit cost of the previous year's model. The R model was smaller and lighter, played both ten-inch and twelve-inch records, and was equipped with a semipermanent needle that could play about forty records without damaging them.

Research and Development

In 1948, the National Bureau of Standards began an ongoing investigation for the division into the whole field of sound recording—film, wire, and tape—including ten-inch discs recorded at 200 grooves to the inch on thinner, lighter, more flexible materials, which still played about fifteen minutes a side. The division ordered six experimental records of this type. If successful, this kind of record would save space and effort in the regionals, since a talking book would be more compact. An average one would weigh only four pounds instead of eleven.

For its more immediate needs, in November 1948, the division contracted with the bureau for research, development, and testing, in order to improve specifications for needles, record materials, and the production of talking-book machines for use with existing talking books. The three, of course, are interdependent. This contract resulted in the first sustained scientific and technical supervision in developing specifications for the talking-book system. As a result of testing sample machines submitted by potential bidders, the bureau developed the S model machine. The division bought 12,000 and, beginning in Fiscal 1950, 15,000 T model machines, with better tone control and greater volume. That same year, the division adopted a semipermanent needle with a 1.8-mil tip radius as best suited for talking-book reproducers.

About 1951, both AFB and APH converted from the "direct microphone to wax master" method of recording to the "tape and lacquer" method. That is, they began making their master recordings with professional magnetic tape recording equipment. Narrating errors could be erased and sentences, words, and even syllables could be rerecorded, cutting the number of retakes by 40 percent and allowing the narrator to produce almost twice the number of masters in a given period. Since the quality of the master was so much higher than the very best disc recording, texts could be recorded from tape to disc with no loss of quality.[130]

About the same time, the bureau reported that conversion from the old 155-lines-per-inch U-shaped grooves to the more desirable 240-lines-per-inch U-shaped microgroove was possible but involved problems of compatibility with existing machines and needles. A needle suitable for existing records broke down the walls of the new microgroove records. The bureau wrote interim specifications calling for a modified V-shaped groove, cut at 155 lines per inch, which would accept either a 1.0-mil microgroove needle or the 1.8-mil needle then in use. The plan was to adopt a full microgroove system after the old records were retired.[131] However, when conversion to microgroove records occurred in Fiscal 1953, older records were not retired, although they became eligible for rerecording if demand warranted it. The previous year, the division had begun production of the A model machine. Somewhat more expensive but with the potential of better performance, it was considered a better value than previous models. The bureau was planning to provide design rather than performance specifications for the loudspeakers in the machines to be produced in Fiscal 1952, since such specifications could incorporate the results of its research. However, in Fiscal 1952, the division became aware of deficiencies in the A model machines; after considerable negotiation, the division accepted at reduced cost 7,500 machines which met reduced standards.

The division terminated its contract with the bureau as of June 30, 1952, because its estimated costs for the research proposed for Fiscal 1953 were prohibitive. In September 1953, AFB offered to have its new Department of Technical Research and Development undertake the work. The Comptroller General ruled in January 1953 that, since The Library found the bureau's services "inadequate and uneconomical," it could legally enter into contracts with nonprofit agencies engaged in work for the blind without going through the process of competitive bidding, on the same terms as for talking and braille books.[132] By June 1953, the Law Library was preparing an appropriate contract, and an assistant chief with a background in electronics and sound reproduction was appointed to the division.

In the first year of its contract, AFB determined that 16⅔ rpm was a feasible recording speed, but several technical problems had to be solved: the recording level had to be halved and the machine amplifiers had to be able to provide twice the gains of the amplifiers then in use. Recording at half the speed would allow twice as much material to be put on the same size disc. AFB also found that compressed speech was possible. That is, recorded speech could be compressed as much as 20 percent in order to allow "speed reading." An average print reader may read at about 300 wpm and a proficient braille reader at 100 wpm. Text was recorded at 175 wpm; compressed speech would permit faster reading without pitch distortion. But whether it would affect the literary quality of talking books was an open question. Speech compression was not a high-priority matter, and economic factors defeated every attempt by AFB to perfect it during the fifties and sixties.[133] Other research, ultimately fruitless, involved investigation of two German techniques, recording on film and on long-playing tape.

AFB studied earlier talking-book machines with an eye to improving new ones, resulting in a better angle of the tone arm and refinements in the amplifier. AFB's recommendations were to keep the machines as simple as possible, both mechanically and electrically, to aim at presentable quality but not high fidelity with its greater cost, to keep costs down by eliminating points of questionable value, and to use only the highest quality components available and the sturdiest construction possible. It studied commercial medium- and low-priced machines to determine desirable features that could be incorporated into talking-book machines and to take advantage of recent developments. As a result, it adopted a transformerless amplifier, for lower costs and maintenance and better quality, and a ceramic pickup arm, for better durability in hot and damp environments. Both had been almost universally adopted by the industry. Improvements were incorporated into the model B machine, of which the division bought 7,800 between Fiscal 1954 and 1956, from a nonprofit manufacturer, the Pennsylvania Association for the Blind, with the recommendation that S models be removed from service. In Fiscal 1956, AFB was working on a small, simple, lightweight machine; long-playing records, less subject to wear and breakage; machines for areas without electricity; and guidance in repairing machines.

The division was also conducting research on braille production, under a contract with APH, beginning in Fiscal 1954. The braille printing techniques then in use were two decades old. The division's goals were to improve the quality of braille printing and its acceptance by blind readers and to reduce costs by applying principles, methods, and materials used generally in the printing field. As a result of a series of meetings held in Louisville in 1954, the division focused on three projects: the physical formatting of braille, such matters as the size of the braille characters, the width and height of the dots, and margins; the use of compositor tapes used to produce print books for the automatic operation of braille embossing machines; and braille books in magazine format, that is, with paper covers and less expensive paper. In Fiscal 1956, the division produced two experimental paperback braille books, which could be embossed and distributed in a few weeks as opposed to a few months for books of a more permanent character; the experiment was continued the next year.

Thus, in the 1940s the division absorbed NLB and the Library of Congress regional and with them the function of circulation; assumed responsibility for the production and repair of talking-book machines and with that the function of research and development; and doubled its budget.

The Regional System

By 1946, the federal program had expanded each regional's collection by almost 10,000 volumes of embossed books and nearly 2,500 containers of talking books. Readership had increased to 27,300 nationwide,[134] but the number of regionals had not grown in a decade. In 1931, the libraries' problem had been a dearth of books to circulate; fifteen years later many libraries found housing a burgeoning collection was a problem, and circulating it to patrons outside their funding base an impossible burden.

Early in 1949, the division learned that the Carnegie Library in Atlanta could no longer afford to serve readers in Florida and Alabama; operating costs were too high and its funding base too small. Believing that the states should assume responsibility for the cost of distributing library materials for blind readers, the Librarian of Congress wrote the governors of those states, suggesting possible alternative arrangements. Florida chose to establish and support its own regional, founded by the Florida Council for the Blind as of July 1, 1950, at Daytona Beach, to provide talking-book service to Florida residents. The Atlanta regional sent duplicate copies of talking books and the division made every effort to complete the new regional's recorded collection to make it identical with those of the other twenty-six libraries. Regional service for Georgia and, on a contract basis, for Alabama, as well as braille service for Florida, was assumed by the Georgia State Library, which leased the building used by the Atlanta regional and kept its staff, giving them employment and retirement rights and privileges comparable to those they had received as municipal employees.

During Fiscal 1951, the New Orleans Public Library notified Louisiana and Mississippi that service to their residents would be discontinued in ninety days unless compensation was provided. Louisiana responded promptly and favorably, but it took the furor created by actual suspension of service to Mississippi before that state found the money needed.[135] And on May 27, 1951, the twenty-eighth regional was established at the State Library Commission in Nebraska for that state's residents.

The division saw two possible solutions to the problem of many regionals' growing financial distress: each noncontributing state could establish its own regional or it could pay on a contractual basis for the service provided its blind readers by another state or by in-state public or institutional libraries. It was the division's position that "under existing legislation the Federal Government" could make "no further contribution toward fulfilling the purpose" of the books it provided beyond attempting to see that service was continued through one option or the other when a regional withdrew service.[136]

By 1951, readership had increased to more than 40,000 and the division had expanded each regional's collection by about 11,300 embossed volumes and 8,000 containers of talking books.[137] The number of regional libraries had increased by only two in fifteen years. The fact that circulation of recorded books was much greater and much more involved than that of braille books exacerbated their problems.

In addition, an "acute shortage of space . . . [was] almost universal." One regional had three times the shelf space it had had in 1931, but it was in three different rooms. Two were remote from the work center, equipped with ten-foot-high shelves, and on different levels, requiring the use of stairs and ramps. The third contained a workshop and the books were coated with dust. "Ordinary public library facilities" were no longer feasible for library services to blind readers. To support the great weight of the books, accommodate equipment for moving them about, and provide loading facilities, what was needed was a warehouse. And, even with "vigorous promotion," much of the collection was not used.[138]

Conference on Library Services for the Blind

To discuss growing problems in the regionals and in the program as a whole, in November 1951 The Library convened the first conference on library services for blind individuals. The 111 people who attended represented every phase of the work—state agencies for the blind, producers of talking books, producers of embossed books, volunteers producing books, regional libraries, educational and rehabilitation agencies, and technicians developing talking-book machines.[139] As a result of the conference's recommendations, an Advisory Committee, composed of one representative of each of the seven types of agencies involved, was established to advise The Librarian on "jurisdiction, authority, coordination, etc."[140]

The implicit message of the conference with regard to the regionals was clear: it was crucial that the division begin providing effective support services in order to allow them to fight increased costs through more efficient use of staff and space.

For example, the division had developed no systematic procedure for helping the regionals weed their collections. The conference passed resolutions that the division should establish a central depository for little-used materials and conduct regular surveys to identify surplus books in order to relocate or destroy them. These ideas were not new; the librarian of the Wayne County regional had mentioned both in a paper delivered at the 1939 AAWB convention,[141] and no doubt they had been suggested before that. Declaring that its "primary statutory responsibility'' was ''limited to the procurement of materials,'' the division nevertheless recognized an obligation to assist and guide the regionals ''principally in connection with the custody of materials and specifically the amelioration of their space and fiscal problems.''[142] However, to deal with surplus books systematically would impose a considerable burden on both the regionals and itself; therefore, the division worked out a simplified procedure to offer temporary relief. Having ascertained the magnitude of the problem and the need for a central depository through a questionnaire sent each regional on June 15, 1953, the division thought the benefits of weeding collections might justify the trouble, although staff for ''such extra curricular activity'' was a problem for all concerned.[143]

Regionals that wished to participate furnished two copies of a list of surplus braille titles in their collections. The division then compiled a master list—by January 1954, nine libraries had supplied lists of more than 2,500 titles total—from which regionals could requisition desired books. Only books surplus to all regionals and thus to the entire program could be disposed of. After three weeks, each regional could consider its unrequisitioned books as excess and announce them as available for shipment to foreign destination in conformity with instructions from the American Foundation for the Overseas Blind or dispose of unusable items as waste paper in the prescribed manner for government property. The division incurred no expense for shipment. The same method, it announced, would be adopted for the disposal of surplus talking books. This procedure was continued to the advantage of all concerned. For example, in Fiscal 1955, the American Foundation for the Overseas Blind sent the program's surplus books to the American Library in Paris, the Victoria Memorial School for the Blind in Bombay, and the Aben-Ku Lighthouse for the Blind in Osaka, Japan.

A central depository for little-used materials was another matter. The division came out in favor of using one or more of the existing regionals, shifting areas of service around somewhat, if a regional with sufficient space could be found. Moon titles had been handled in this way when demand fell off. But any regional providing such national service would need financial support for additional staff—perhaps requiring legislation in all the states. In any case, a new catalog would be required. However, in January 1953, the Advisory Committee recommended that the Library of Congress study the possibility of becoming the central depository and report back. The division's regional was already providing a national service for unique braille items. On June 22, 1954, the ALA Committee on Work with the Blind recommended six strategically located centers be designated to provide interlibrary loan service on a reimbursement by nominal fee basis.[144] The issue remained undecided.

In the context of storage problems, an incomplete set of records meant a book on the shelf, not in circulation. The conference's resolution that the division establish better procedures for obtaining replacements had little effect. Typically, when enough requests for a particular record had accumulated, the division forwarded them to the appropriate studio. This method achieved certain economies, but in the interim the wasted investment in the idle book was far greater than the cost of ordering single replacements as needed. From 1949 to 1952, the division stocked extra copies of new talking-book titles for use as replacements but found that the problem involved older titles and therefore discontinued the practice. At the June 1954 meeting of ALA, the librarians present discussed the issue and generally agreed that because of the cost of re-pressing and the superior quality of contemporary recording techniques it might be preferable to rerecord older works rather than re-press from the original masters.[145]

The conference's resolution on central cataloging was more fruitful. Although the division regional prepared its own catalog cards, the division had never provided cards for all the regionals. In 1953, the Processing Department of The Library began drafting rules for cataloging books for the blind, and these, together with illustrative printed cards, were distributed to the regionals for comment. Once the rules were established and approved by both ALA and The Library administration, cataloging began. In 1954, the first cards for books in production were distributed free to regionals. Copy was prepared by the division and edited by the Descriptive Cataloging Division. The first year's experience with centralized cataloging—80,000 cards in dictionary sets—was discussed at the ALA conference in July 1955. While recommending some deletions and additions, the regional librarians emphasized how much time and money the project saved them.[146] By 1956, brief annotations had been added to the cards at their request.

Pointing out that a "union catalog of all materials for the blind" would save considerable staff time, the conference issued a resolution that the division publish and distribute one. The last union catalog of handcopied books had been compiled by the Braille Transcribing Service in 1934. Early in 1956, the division published a new catalog, in a 1,000-copy edition, containing some 15,000 titles reported in libraries across the country. Used in conjunction with the division's 1948 cumulative catalog of press-braille books and its 1954 cumulative supplement, the union catalog constituted the requested reference tool for regional librarians. The division began accumulating cards for a supplement and for a bibliography of free braille and recorded religious materials distributed to regionals by religious organizations and individuals.

Similarly, the need for an operations manual had been recognized by librarians for some time. Their primary opportunity to exchange information about routines was at the annual ALA meeting. But, since the discussion was reported only briefly, only those librarians who attended benefited. In 1938, the ALA conference had adopted the tentative outline for a handbook on routines, written by the Committee on Work with the Blind. The book was to be based on an extensive survey and evaluation of the various techniques and routines actually in use.[147] It was never published, however, because of World War II. In response to a conference resolution, the division committed itself to produce such a manual in order to improve operations and the uniformity of services. With the draft of a manual for the division regional as a basis, the manual would be a "cooperative venture drawing upon the experience and knowledge of individuals in the field."[148] The director of the division visited twenty of the twenty-eight regionals in Fiscal 1953 before circulating a draft for comment.[149] In July 1955, a tentative version of the manual was discussed at the ALA conference.[150]

The librarians at the 1951 conference recognized "the advantages of Federal aid in insuring or contributing to uniformity of standards and the value of uniform standards for" figuring "costs and a more effective allocation of funds." The operations manual, for example, would be useful in justifying budget needs for state agencies and would offer convincing proof that a particular regional was substandard in staffing or space. They and the others at the conference also recognized the need for cooperation and better communication among all concerned, both agencies within the program and volunteer groups supplementing the program.[151] The conference recommended future conferences on library services for blind readers. The division agreed to sponsor such conferences but felt no need to do so annually, suggesting other agencies might alternate with it as sponsor. It had already planned a conference for volunteers in 1952 and, as another possibility, suggested a national conference with a general agenda every third or fifth year and national conferences with special agendas in the intervening years. A third possibility it suggested was general national conferences on library services every three to five years with regional conferences in intervening years.[152] In the meantime, the division increased its visits to the regionals and producers and its attendance at conferences of organizations working on behalf of blind people.

The conference also passed resolutions relative to traditional functions the division saw as its primary responsibility: selection of titles and equipment.

Regional librarians wanted improved book selection. In preparation for the conference, the division had authorized a study of its selection policy by Blanche P. McCrum. In addressing the conference, she pointed out the inherent difficulties in the existing situation: the impossibility of creating an adequate collection compared to that available to sighted people; the long production time, caused in part by the selection process itself; and inadequate staffing at the division (less than 7 percent of its annual budget went for personnel, a ceiling imposed by Congress). She espoused a "bill of library rights" for blind readers, who read for the same reasons sighted people read, but she noted that blind readers have special requirements. Information about actual and potential patrons was lacking. She found marked differences of opinion in her study of 4,100 readers and librarians about what readers wanted. These reflected the tensions under which the selection officer had to work. Many patrons objected to any book which did not satisfy them, including those with "realistic" writing;

others wanted contemporary literature, which tended to contain just that sort of writing. Perhaps two-thirds of the blind population were over sixty years of age; the prevailing opinion was that they read for diversion and that selection should be in their interests. Others wanted basic background materials in every subject field for the inquiring mind. She noted a lack of material for young newly blind people with economic responsibilities and for newly blind people who needed high-interest, low-vocabulary braille books. Despite this diversity of opinion, most readers approved of the collection and the selections being made. She proposed stimulating research on blind readers' reading interests, establishing a readers' advisory service in the division, and hiring a library field representative to improve use of existing stock and the bonds between the regionals and the division."[53]

The Advisory Committee recommended that regional librarians be allowed to select only the titles they wanted, whereas the practice was to distribute a standard number of titles to the regionals automatically. It approved the division's policy of not eliminating books with possibly offensive language provided the passages did not constitute pornography, obscenity, or constant or immoderate profanity and of not bowdlerizing texts once they were selected. It also suggested using an identifying symbol for books some readers might find offensive.

On June 10, 1954, the division issued a policy statement on book selection. It declared that the tastes of blind readers were substantially the same as those of sighted readers and that one of the program's objectives was to provide the same variety of reading materials the latter enjoyed. Because of severe limitations on the number of books that could be selected, the statement stressed choosing "books of high quality from the points of view of readability, interest, competence of treatment and quality of writing," books of not "merely ephemeral interest," and building "a balanced collection" to "satisfy a wide diversity of reader interest," providing informative works but allowing for the preponderant preference for fiction. Older enduring titles were to be selected concurrently with new titles. The statement specifically mentioned including publications on current political affairs and attempting to provide opposing sides of issues, securing for simultaneous transcription books of equal caliber, if available, to accomplish this goal. Religious works of an informational and inspirational nature were to be included but not those that were doctrinal or sectarian.[154]

The conference also urged the division to improve arrangements for talking-book machine repair and to standardize needles, preferably in conformity with commercial practices. Repair of talking-book machines had been handled by commercial firms since 1947. In Fiscal 1952, the division established new procedures, and, in the next fiscal year, 75 percent more units were repaired at a lower per-unit cost. Machines in use in the early 1950s required different needles: all the more recent models could use a semipermanent needle good for playing about 200 records, while the older AFB machines required ordinary steel needles which had to be changed after several playings. Thus the regional library had to keep track of which machine models its patrons had in order to supply the right needles. When commercial long-playing records and phonographs became available after the war, they were not compatible with the program's equipment. Until commercial needles were standardized in a size that would not damage talking books, there was little to be done. The situation, in fact, got worse before it got better: in Fiscal 1957, three different types of needles were required for different talking-book machine models, and in Fiscal 1958, four different types.

The foregoing suggests some ways in which the division had not taken into consideration the impact of technical change on the libraries' economic and physical problems—a matter of considerable concern to the conference. The entire talking-book program appears to have been initiated without such consideration, and the attitude continued with subsequent changes, such as those which resulted in new machines that could not play old records satisfactorily. The use of performance specifications exacerbated the problem by permitting various designs in successive models of talking-book machines so long as each design met the required performance standards. In contrast, by using design specifications, the division could assure more compatible successive models.

Finally, the conference issued resolutions on the need for a strong Division for the Blind within the Library of Congress structure, preferably one with "strengthened and improved facilities," and the need for further study on the complex problem of the regionals' financial burdens. On the latter point, the Advisory Committee noted two years later, in 1953, that various regionals had on their own initiative developed interstate or state-municipal agreements on per-capita reimbursement for service, an effort which it said the Librarian of Congress might foster by encouraging the states involved to accept financial responsibility. By 1953, several ways to restructure the regional system had been suggested, including fewer, larger libraries serving expanded areas. Such a system could be better coordinated, with improved uniformity of operations and standards through central direction; however, few regionals could extend their areas of service. On the other hand, establishing a regional in each state would provide closer liaison between regionals and state commissions, simplify financing within states, and stimulate interest in the service on a state basis, but it would also increase procurement costs. The Advisory Committee concluded it would be wasteful to establish a regional in each state; and, before considering any change in the regional system, it wanted corrective studies made of storage space, state payment for service in existing regionals, new technological developments, proper processing of material, and developing federal cataloging and standard practices.

While the division considered the 1951 conference an important first step in correcting "an apparent lack of liaison and understanding relating to the interdependent yet separable functions involved in the varying aspects of the program as a whole,"[155] the meeting did not lead to significant improvements. In fact, it appears that little was done until the House Appropriations Committee suggested in 1953 that consideration be given to transferring the program to the Department of Health, Education, and Welfare. Discussion with HEW followed, but Dr. Luther Evans resigned as Librarian of Congress in July 1953 to become Director-General of UNESCO, and the question was tabled until the new Librarian, L. Quincy Mumford, was appointed. His recommendation on April 21, 1955, to the Joint Committee on the Library was that the books for the blind program remain at The Library, which had "the techniques, the facilities, and long-standing effective relationships with the agencies" involved to administer what was "essentially a library program." The committee accepted his recommendation.[156]

The St. John Study

Convinced that "the burden of storage and distribution" was a grave problem" and that a solution to the regional system's inequitable financing could prove controversial, AFB proposed in 1955 a national study whose primary purpose was "assess[ing] the administrative and professional effectiveness" of the regionals and the division. The study, fully supported by the Library of Congress, would be composed of three surveys—of the twenty-eight regionals, of the fifty-five agencies and organizations distributing talking-book machines, and of the library needs of the blind population—and the development of "an authoritative statement of principles and standards" to improve "the professional level of library services for blind persons."[157] AFB persuaded Francis R. St. John, chief librarian of the Brooklyn Public Library, to direct the surveys of regionals and machine-distributing agencies. The third survey and the standards would come later.[158]

St. John and the ten other prominent librarians comprising the survey committee, among them, visited every regional except Hawaii to "permit value judgments." A committee consisting of educators, the executive secretary of ALA, the head of the division, network librarians, and others served as advisors. Both committees were involved in developing the survey questionnaires, reviewing the data obtained from interviews and questionnaires, discussing a draft report, and reaching agreement on final recommendations. St. John wrote the published report.[159]

In essence, St. John developed four major interlocking recommendations touching federal, state, and professional responsibilities: professionalization of the regionals, full financial responsibility of each state for library services to its own residents, stronger leadership by the division, and the priority of service to readers. The last was stated explicitly in his "General Recommendations" but not discussed separately in his report; it was, after all, the premise upon which the entire program was or should have been based, in his view, and inherent in every aspect of his study.

Professionalism in the Regionals. In 1956, the regionals were still for the most part understaffed, underfinanced, and badly housed. Because theirs was largely a mail-order circulation conducted by phone and correspondence, regionals were often located in out-of-the-way areas and needed to keep more circulation records than libraries serving sighted readers. St. John compared the work to operating a reserve book system in a public library.[160] The basic records were a reader's file for each patron, including the books requested and those sent, general reading preferences, mailing labels, and any notices to discontinue service temporarily; a book card file, usually divided into books on the shelf and those in use; a card catalog; a shelf list; and sometimes an accession file. Most libraries handled braille and talking-book circulation separately and needed two sets of these records. Additional braille files were required in libraries with blind staff members. This multiplicity of records still showed little uniformity of method from library to library.[161]

The desperate need for efficient procedures can be inferred from the routine required. Staff separated returned braille and talking books, checked to see that all the elements were present, in the right order, and in good condition, and removed the address label. The book charge cards were removed and filed in the "books in" file to indicate that the titles were available for circulation. The address label triggered the pulling of the reader's file for book selection. Titles requested by the patron were selected from the "books in" file and the book cards and address label were sent to stack assistants, who took the volumes from the shelf and prepared them for mailing. The titles were dated on the reader's request list, which was then returned to the reader's file.[162]

Poor physical conditions often necessitated excessive lifting and carrying of heavy, bulky braille books and twelve-inch records. St. John estimated that each staff member "handled an average of thirty-five *tons* [of materials] during the year."[163] Although conditions had actually improved since the 1951 conference, eleven regionals were judged poor in this area. Conditions in some were "unbelievable: crowded shelves, books piled on top of seven or eight foot high shelving, on floors and on tables. In some cases whole sections had to be shifted out of the way as books were circulated or returned." And in the shipping area of many regionals, volumes were "handled unnecessarily many times just to make room to work."[164] In 1957, one regional was in "a low-ceilinged basement room that looked as though it might collapse at any moment. Everywhere . . . shelves heaped with black boxes. It was so crowded you could hardly walk—a regular rabbit warren. This had formerly been a furnace room; the old furance was still there, in fact, and so were some of the old ashes."[165] Among those regionals considered to have adequate to excellent space and stack arrangements was one with fifteen-foot-high shelves for the braille collection.[166]

St. John recommended labor-saving devices and methods—appropriate shelving, adequate elevators (no ramps or steps), aisles wide enough for trucks, efficient shipping areas, simplified record keeping, and a fixed-location system of shelving materials, since the classification number system required "constant shifting" to make room for new volumes to be put "in their proper classified position on already overcrowded shelves."[167] Collections also needed to be weeded. Regionals had retained little-used materials because of lack of staff time to cull them, complex Library of Congress regulations on disposal of federal property, the lack of a central depository for them, and the understandable but self-defeating desire to keep materials some reader might need some day. St. John recommended that the Library of Congress simplify its regulations on disposal and eliminate the rarely productive step of asking regionals if they wanted any books on another regional's surplus list.[168] To overcome the isolation of the professional staff from their parent organizations and their peers, due to the general warehouse nature of the regionals, St. John suggested state-wide meetings of librarians to promote better understanding of library services for blind individuals.[169]

The average head librarian in the regionals was a sighted woman with a library science degree and ten years' experience in library services for blind readers. The average staff member was sighted, paid, and possessed of a high school education. Only 17 of the total 201 staff members had degrees from library schools and six regionals had no one with a college degree on their staffs. Very few regionals had volunteer staff members. Of the 18 blind staff members, 7 worked in the division regional. In comparison, public librarians in most states were required or being required to have master's degrees in library science for entry-level positions. St. John recommended that each regional employ at least one—more in larger libraries—fully qualified, trained librarian and that professional librarians have sole responsibility for book selection for patrons.[170]

Twenty-eight percent of the total paid staff positions in the regionals were part-time. Assuming that to mean half-time, St. John estimated that each full-time staff member was responsible for an average annual circulation load of 7,950 volumes; the actual circulation load varied from just under 3,000 to just over 15,000 volumes.[171] According to St. John's figures and recommendations, about half the regionals were understaffed. A total of twenty-eight additional full-time staff, an increase of about 14 percent, would have been required to bring the regionals up to the standards he proposed: a minimum of one staff member per 300 readers, with additional clerical and page help when the circulation per staff member rose above 9,000. On these terms, one regional would have had to triple its staff.[172] Because of the shortage of personnel, despite their dedication, the staff of many regionals had to slight, defer, or eliminate such duties as weeding collections, checking the condition of returned books and promptly recirculating them, preparing reading lists and promotional materials about the library, and observing the division's regulations on loan periods and overdue books.[173]

Financial Responsibilities of States. Improving staffing and physical conditions in the regionals required better funding. St. John produced solid data on the problem of inequitable financing. Of the thirteen regionals in public libraries, nine received no compensation from any state, not even their own, and only one—a county library—served only the area from which it received tax support. Yet these thirteen libraries accounted for 53 percent of the total annual circulation. Of the six state libraries, three limited service to readers in their own states, and only one of the other three was repaid for its out-of-state service. Of the five nonlibrary state-supported institutions serving as regionals, two restricted service to their own states and only one of the other three was reimbursed for service to another state. Of the two private organizations serving as regionals, one received no support from either of the states it served, and the other received about half of its annual budget from a flat fee for each resident of four states who used its services during the year. The one territorial library regional was fully supported by the tax area receiving its services. And, since consolidation in 1946, the Library of Congress regional served Maryland, Virginia, the Carolinas, and the District of Columbia, none of which contributed to it financially. The general appropriation for books for blind readers authorized by Congress for the national program paid for this service except for three positions and the cost of housing, which came from the general Library of Congress budget.[174] Nearly half of the total cost of personnel, one of the two most significant budget items determining the funds available for promoting and coordinating the national program, was attributed to the regional. In sum, about half the states made no contribution to the library service their blind residents received.[175]

St. John was adamant about relieving regionals of this unfair financial burden, which had existed since before the inception of the program in 1931 but was greatly exacerbated by the program's very success. He insisted that each state accept full financial responsibility for all aspects of direct library service to its blind residents, including machine distribution. Although he noted that people living near regionals tended to use them more heavily, he recommended that states with fewer than 1,000 blind residents contract with regionals in neighboring states to provide service because of the impracticality of maintaining a separate library for a small population. He also suggested that regionals should come under state library extension departments, where they could benefit from the staff's professional skills and experience and where integration with the state's public library system could be achieved.[176] As for the regional operated by the division, even before St. John's report was published, the Library of Congress indicated that it would transfer responsibility to the four states and the District of Columbia as soon as possible. In Fiscal 1959, regionals providing talking-book service were established at Richmond for Virginia and Maryland and at Raleigh for North Carolina. The latter extended service to South Carolina in Fiscal 1961 by contractual arrangement. The division continued for some time to serve the District of Columbia and to provide braille service to Maryland, Virginia, and the Carolinas.

National Leadership. Machine distributing agencies also were not functioning efficiently. They typically failed to provide regionals with information about new readers—their interests, education, reading abilities, ages—which would help librarians select books for them when necessary. In addition, agencies sent blind people print instructions on how to use machines.[177]

The system also had distribution and repair problems. The division had developed no way to determine either local or total national need; it merely sent agencies the number of machines requested if they were available. At the time of the survey, the total number of excess machines in various agencies was 606, and the total number of persons waiting for machines was 759—not too bad a fit if the machines were where the patrons were. But twenty-eight agencies reported no machines available and 568 readers waiting; nineteen agencies had from 3 to 150 machines available—six each had more than 30—and 136 readers on waiting lists. Detailed annual machine distribution reports to the division were not tabulated promptly and were used more as an inventory report than for allocation control.[178]

Moreover, although the division's staff said that all the old machines had been recalled and the tone arms and needles replaced to fit them for the new records, when St. John analyzed the report of one center, he found that half of the machines had been in use five years or more without being exchanged or returned for major repairs, 9 percent had been assigned at least ten years before, and 5 percent had been in use fifteen years or more. Only two-thirds of the distributing agencies reported that they supplied readers with replacement machines when their original machines were being repaired. Finally, because repairs at the federal centers took an inordinately long time—one or two months—the distributing agencies, quite against regulations, had many repairs made locally, often in one or two days, although many of the repairmen were not adequately trained.[179]

St. John recommended that the division assign machine distribution to the regionals and permit local minor repairs under regulations, leaving major repairs and the decision to scrap and cannibalize machines up to the central repair agency. He also proposed personal instruction in using a machine when it was delivered; a central perpetual inventory system so the division could, in an accurate and timely way, control the allocation of machines; closer checks on machine use and condition, so that obsolete machines could be replaced before records were seriously damaged; and determination of the expected life of machines and use of follow-up letters or visits at the end of that period.[180]

Pointing out that the Pratt-Smoot Act gave the Library of Congress authority to set standards and issue regulations, St. John urged the division to establish and enforce specific standards for performance and operations. During his study, the division had suspended work on the manual of operations the 1951 conference had requested. He recommended publication as soon as possible but with an important modification: instead of merely describing the various practices in use, the manual should make specific recommendations and cover more ground. Most regionals, he said, would welcome "advice, suggestions and direction" from The Library. In addition, The Library should set minimum standards for physical plants and consider relocating regional service if libraries operating in "deplorable quarters" could not remedy conditions within a reasonable period. The Library's argument that it could not coordinate the regionals' work was fallacious; it could, and without threatening their autonomy. Indeed, he recommended that the division set standards for everything from loan periods to repairs.[181]

St. John repeatedly stressed the need for improved communication —among the regionals, between regionals and the division, and between regionals and the machine-distributing agencies. In addition to recommending that The Library sponsor "an annual conference of volunteers and professionals working to provide books and library service," he suggested that the division regularly publish bulletins for regional librarians, secure adequate stenographic help for correspondence, and—noting that the division made decisions without first-hand knowledge of conditions in the field—develop a field service with adequate travel funds for its staff and for key division personnel to visit the regionals regularly.[182]

St. John's study included the division's internal work as well. He deplored the lack of compatibility between old machines and new records and the division's "fascination" with "trying to perfect" the talking-book machine; it had produced eighteen different models in twenty-one years. Echoing the 1951 conference's recommendation to consider the implications of future technological change for the libraries, he strongly recommended that changes in equipment be "complete," apparently envisioning the release of new media and books which would supersede old ones. St. John noted that a "constant preoccupation with technical advances" was a two-edged sword which could improve or impede library service to the individual reader. He nevertheless endorsed the division's research and development program, suggesting that as much as 10 percent of the budget be devoted to such work coordinated in a single long-term plan, with emphasis on reducing the bulk and cost of books so that more titles could be produced for the same amount of money. He approved of the division's research on tape systems and 16⅔-rpm talking books.[183]

Updating McCrum's study, by comparing the division's catalogs to published booklists, he found the division's selections of "high standard" with "good variety" in such categories as fiction, literary classics, biography, and history. He recommended meeting the vocational and professional needs of the blind reader, using the central depository and possibly volunteers for limited editions; reviewing policy on westerns, mysteries, and romances, with a view toward reducing their number; and providing more scientific, technical, language, and reference materials. Recognizing that the last imposed serious production and distribution problems, he suggested more phone reference service from state agencies and public libraries. And he urged improving routines—seven committees were involved in the selection process—so as to make possible the more timely production of topical books; allowing regionals to specify the number of extra copies they wanted of each new title after the final decision was made on production and format rather than before; and conducting a study of the reading tastes of the blind population, both users and nonusers, to test the assumption that they were the same as sighted readers'. He commended the division on *Braille Book Review* and *Talking Book Topics*, suggesting only that older titles sometimes be included and that copies of these two "influential publications" be sent to public libraries to assist them in their readers' advisory service to blind patrons. He also approved a concept far removed from Dr. Putnam's idea of a permanent library: expendable books, that is, relatively inexpensive paperback braille editions of ephemeral titles to be disposed of after their initial popularity waned, introduced experimentally by the division in Fiscal 1956. He hoped for a parallel development in talking books.[184]

One collection St. John found totally inadequate was the children's collection. On July 3, 1952, the Pratt-Smoot Act had been amended by striking the word *adult*.[185] Congress had provided no instructions or restrictions—and no additional funds—for a children's collection. Despite existing problems, the 1951 conference had endorsed extending service to children, although the bill it had supported increased the division's appropriation accordingly. The tendency to encourage blind children to attend regular schools was growing and those who attended residential schools were home, away from their libraries, all summer. The regionals had been getting requests for children's books and could offer very little suitable material.[186] In order to supplement rather than duplicate the work of APH, the division, with the Advisory Committee's concurrence, had established the policy of providing only recreational and collateral reading materials for school-age children, of lending talking-book machines and recorded titles only to children five years of age or older (with an adult accepting responsibility), and of recording materials beginning with the older age groups in order to take advantage of existing suitable adult books in building a collection for children, which would recognize age or grade levels.

Although the Advisory Committee had recommended appointing a specialist in children's literature to handle selection, the division had "decided to take advantage of a generous offer of assistance" from ALA's Division of Libraries for Children and Young People. A committee consisting of members of that group selected books from lists compiled by the editorial staff in children's books of ALA's *Booklist*.[187] The first books—thirty-five recorded titles from APH's stock of collateral reading, including *Little Women*, *Little Men*, and *The Yearling*—were released in Fiscal 1953. Although funds for the year in which the legislation was enacted were already obligated, the division somehow found money to start the collection. The following year, 22 percent of the recorded titles and 20 percent of the braille titles the division ordered were for children; in Fiscal 1955, 25 percent and 46 percent; in Fiscal 1956, 18 percent and 38 percent. At the expense of the adult collection, a total of only 152 juvenile titles—72 braille and 80 recorded—were available in the regionals for an estimated population of 20,000 blind children of school age across the country almost three years after the act was amended.

St. John took the position that extending service to children could not be effective until enough titles were available in each regional. He pointed out that selection by the same staff member who handled adult titles, on the basis of advice from the ALA committee, had worked satisfactorily in only one year, when the committee chairperson was particularly interested in the project. He recommended, as had the Advisory Committee, that the division appoint a children's specialist. He charged The Library with ensuring the success of the program for children and suggested that The Library sponsor a national conference of teachers and regional librarians to answer such questions as: what kind of library service do children need? what type of books best served the need? what would be needed in addition to book service? and how can libraries located hundreds of miles from schools best serve both teachers and children?[188] He insisted that Congress provide more funds specifically earmarked for the children's collection.[189]

St. John did not stop there. He recommended that Congress appropriate more money for the division for a larger collection, a minimum of 1,000 titles produced annually; enough talking-book machines so that every blind person who wanted one could have it; a central depository; and necessary improvements in communication in the regional system, including three new field workers to advise regional librarians or act as liaison between the regionals and the division or among regionals; regular visits to regionals by the field workers and occasional visits by key division personnel; and an annual conference on library service for blind people. He also proposed a grants-in-aid program to improve library service to the blind reader at the state level.[190]

Further, noting that the Library of Congress was the "key to the whole system" of library service for blind people,[191] he asserted that there had been "indications dating back to the beginning of the program, that this special service has been considered as unusual and not an integral part of the overall operation," possibly because "the kind of service required . . . is foreign to the reference and research function" of "this great library."[192] Indeed, the service requires "different techniques, different skills, in fact, a different philosophy than that required for its reference and research service."[193] He recommended that, "if, for any reason, it were found that the Library of Congress in the future is unable or unwilling to support enthusiastically an active program of library service for the blind, consideration . . . be given to the establishment of a national agency for the blind."[194]

The significance and impact of St. John's report can hardly be exaggerated. It laid out in detail the problems, both those inherent in library services for blind individuals and those resulting from decisions taken by organizations providing it; it proposed solutions; and it assigned responsibility for acting upon them in a blueprint for the future. The regionals recognized the need for central guidance and the division was ready to supply it; for years afterwards, a copy of the study was on the desk of every supervisor. The attitude of the Library of Congress had changed from seeing itself as merely a "convenient administrative agency" to handle the program in the thirties, in the words of a later Librarian, to one of accepting "responsibility for real leadership" in the forties,[195] to one of full commitment by the mid-fifties. And Congress demonstrated its support for the "expansion and development of a balanced program" with "constantly expanding needs"[196] by removing the ceiling on appropriations in 1957[197] to allow future budget planning to reflect national requirements more adequately than was possible under the limitation. The Fiscal 1958 appropriation had already been passed, but on March 28, 1958, an act of Congress appropriating an additional $75,000 for immediate use in acquiring materials was approved.[198] The Fiscal 1959 appropriation was $1,355,000; six years later it was $2,446,000, an increase of 80 percent.[199]

Progress, 1956–1965

The Network

The division promptly began addressing the problems of inequitable funding and poor housing for the regionals. The two states that took over talking-book service for their residents from the division—

Virginia and North Carolina—and a full-service regional in Iowa brought the total number of network libraries to thirty-one in Fiscal 1960. By the end of the fiscal year, members of the division staff had visited and evaluated all but one of the regionals. By July 1961, eleven regionals were relocated in better quarters, including one building designed specifically for library services for blind readers. A number of regionals were moved to or established in state libraries. By Fiscal 1964, it had become obvious that regionals could not operate with maximum effectiveness if they served more than one densely populated state. The Library began to negotiate with various states about establishing new libraries and another regional was opened in 1965.

Regional collections were made more efficient. In 1959, well over half of the shelf space in the libraries was taken up by braille materials, which were used by less than 20 percent of the readers. To deal with this problem, the division consolidated the braille collections and services of some neighboring regionals with few braille readers. By 1964, six libraries offered only talking-book service. To make the regional collections truly working collections, the division requested from librarians in Fiscal 1958 more realistic estimates of the number of copies of new talking books they needed, and it collected surplus braille and older talking-book titles and distributed them to regionals that wanted them, often one of the newer libraries, but a large number of books were disposed of through appropriate channels. In Fiscal 1962, librarians were authorized to discard talking books produced before 1955 if they wished; three years later, most of these books were off the shelves. The division continued to encourage weeding obsolete titles and by Fiscal 1965 librarians were authorized to discard talking books five to ten years old, which were wearing out, and recorded magazines six months old.

By Fiscal 1962, the division was encouraging small deposit collections in cities without regionals or in areas with many potential patrons, such as rehabilitation centers. The division itself established a deposit collection in nearby Montgomery County, Maryland, to make books more accessible by putting them in residential areas and to encourage the integration of blind and sighted children. The books could be borrowed through any of the twelve branches of the public library system. Additional deposit collections were later placed in other counties adjacent to the District of Columbia.

The division regional was in a better position to serve as a laboratory in other respects as well, once it was relieved of talking-book service to South Carolina and Maryland by the North Carolina and Virginia regionals. Its collection was weeded, modernized, and strengthened and better practices were initiated: visible files of book slips and readers cards, more effective control of circulation and overdue books—all features of the better network libraries—and a subject catalog. The goal was to make the regional demonstrate the effectiveness of high standards and efficient operation. In addition, it still functioned as a national resource for unique volunteer-produced titles.

To promote communication within the network, The Library sponsored a three-day conference for regional librarians in November 1960, at which a free and full discussion of regional and division activities took place, and one in May 1963, at which an operations manual for librarians was discussed and accepted as a basis for providing uniform services throughout the country. At a third conference, held in October 1965 in Louisville, the librarians were able to gain some insights into the techniques of book production in braille, large-print, disc, and magnetic-tape formats at APH and the division reported on technical developments in progress—aural indexing on records, expendable records, and books on cassettes. In addition, the division also ran special meetings or workshops at annual conventions of ALA and of the American Association of Workers for the Blind, an effective way to accomplish a good deal of network business at relatively little expense.

Further, the division began issuing a newletter in January 1958 as a means of sharing news from the regionals and about the division's activities and policies. For several years the publication was compiled by regional librarians serving as guest editors. And in 1959, the division began issuing "circular letters" to the network on such subjects as management, technical matters, braille, and reference work. Beginning in mid-1965, a newsletter was issued to advise volunteers involved in the production of books and music and in other activities or issues relating to their work.

Other support services provided regionals included prompt replacement of damaged records, standardized circulation book cards, and annotated catalog cards. Because more titles and copies were distributed to each network library, the emphasis fell on simplifying procedures. For example, in Fiscal 1963, in addition to classification numbers, the division began to use title accession numbering, which facilitated fixed-location shelving in the network libraries.

Professionalization of the service was aided by publication of standards of service in 1961 and 1966. The first standards were a concise statement prepared in cooperation with the ALA Round Table on Library Service to the Blind and edited and distributed by the division.[200] They defined the service as essentially a public library service for blind readers and a reference service for anyone interested in blindness and the services available to blind people. The standards called for placement of regionals in a traditional library, rather than a nonlibrary setting; for materials to be processed, organized, and serviced through the network librarian, rather than the parent library; and for adequate space for the bulky reading materials involved. Professional and personal qualifications for librarians were specified and services to be provided by each library were listed: preparing and distributing reading lists and planning reading programs for patrons' informal self-education; recommending appropriate collateral reading for patrons undertaking formal education; providing reference service; supporting and participating in the educational, cultural, and recreational activities of groups and organizations of blind persons; recommending books of established importance to encourage constructive use of leisure time; and supplementing the collections provided by the division through purchase, gifts, loans, or other means.

Adopted by ALA and published in 1966, the first extensive set of standards for library service for the blind reader was written by a committee of twelve, including the chief of the division, network librarians, and representatives of APH and volunteers. Part of a thorough examination of seven types of service programs for blind people, the work was prepared under the auspices of an autonomous body, the Commission on Standards and Accreditation of Services for the Blind (COMSTAC). [201] The standards defined three levels of responsibility —federal, state, and community. Among the basic principles enunciated was the need for an interlocking network consisting not only of the Library of Congress and the regional and subregional libraries but also all other libraries, even the smallest public library branch or school library, to provide appropriate services to the low-density blind population. The standards pointed out that blind readers' needs are the same as sighted persons and that library services provided them have the same basic principles and objectives.

Each state was enjoined to maintain a library for its blind residents if they numbered more than 1,000 and to cooperate with other states in providing services if they did not. The standards set professional qualifications for staffs of these libraries and required them to be of equal rank with other library departments within the parent library.

Standards for community libraries required including blind people in library activities, such as story hours and discussion groups, and maintaining awareness of and offering guidance in the use of available resources, such as the division's catalogs of books in all formats for blind people of all ages.

Talking-book machine repairs were decentralized. In Fiscal 1959, the division contracted for major repairs of older machines to be made by RCA Service Company, which had twenty-six branches across the country. New machines were repaired under warranty by Sears service branches located in nearly every city with a machine-lending agency. And almost every machine-lending agency entered into agreement with the Library of Congress to make minor repairs, such as replacing fuses, defective tubes, and other parts; they repaired almost 4,800 machines at an average cost of $2.25 in Fiscal 1959. The division produced two technical manuals—unprecedented in the program—in Fiscal 1960 and brailled one of them the following year. Even so, machine-lending agency personnel lacked the technical expertise to make the system work. The division turned to the Telephone Pioneers of America, a volunteer group composed of active or retired employees of the telephone industry who had a minimum of twenty-one years (now eighteen) of service. A pilot study was begun in Fiscal 1960, using a chapter in the Washington metropolitan area and another in a rural section of Virginia. The results were so good that even before the study was completed, the division asked that service be extended to other areas. In Fiscal 1961 no machines were repaired by commercial firms, and within two years Telephone Pioneers were repairing talking-book machines in every state except Alaska—better, faster, and at an average cost of only $0.66. In 1964 they repaired almost 12,000 machines nationwide. With the division supplying parts and the Telephone Pioneers labor, further economies were achieved through centralized purchase of vacuum tubes.

Equipment

The trouble over model A machines and with the National Bureau of Standards in Fiscal 1952 had precluded the production of talking-book machines in Fiscal 1953 and an average of only 3,900 machines had been manufactured annually in the next two years. The average rose to almost 8,750 for the next five years, and by Fiscal 1959 there was no shortage of machines. For 1961 to 1965, average annual production increased by more than 30 percent. As a result, readership, largely talking-book users, rose by about 45 percent between 1956 and 1965.

Integrating production with research and development, the division began in Fiscal 1957 to produce two-speed machines which could play both the existing 33⅓-rpm records and the 16⅔-rpm discs under development. Two experimental talking books were produced at the slower speed in Fiscal 1959: John Gunther's *Inside Russia Today*, narrated by the author, on nine-inch embossed discs; and *San Francisco Bay*, on twelve-inch pressed discs. The embossed disc proved a literary success but a mechanical failure. Three years later, the division began converting the talking-book program to the slower speed on pressed discs, starting with the seventy-five juvenile titles produced that year. After January 1963, all talking books were produced at 16⅔ rpm on ten-inch discs, with up to forty-five minutes of reading time per side. The savings achieved permitted the production of more copies of each talking book and the first five talking-book magazines in the program. The division had declared obsolete and recalled all one-speed machines by July 1962.

In Fiscal 1964, the division began using a double needle with diamond stylii. The new needle cost twice as much as the sapphire needle previously provided but played ten times as long, that is, 1,500 instead of 150 hours. In addition, it reduced wear on records, prolonging their life.

In Fiscal 1961 the division also produced an instruction record for talking-book machines.

At the same time it was developing the 16⅔-rpm talking book, the division was conducting, under contract, research on even slower-playing discs. Practical prototypes of 8⅓-rpm records and machines were produced in Fiscal 1959 and field tested. The division began producing only three-speed machines in Fiscal 1965. And the Telephone Pioneers undertook a three-year project of converting the older two-speed machines to three speeds by installing new motor assemblies. As soon as enough machines were available, the division planned to produce all new talking books on ten-inch 8⅓-rpm pressed discs.

Concurrently, research, development, and field-testing were going forward on the division's own encapsulated tape system. No proven cartridge system was on the market at the time. The division's prototype machine could play at both the standard commercial speed of 1⅞ inches per second (ips) and 15/16 ips, and the machine itself selected the appropriate speed automatically. The cartridge measured 6½" by 6" by 1¾", weighed two pounds, and held 900 feet of tape, up to twelve hours of reading time. Technical problems, especially duplication of tapes, persisted, and this system was never incorporated into the program. Once a satisfactory cartridge system was worked out, the division envisioned ultimately converting completely to it, but for some years to come it would function in tandem with discs. An encapsulated tape system offered many advantages over both discs, which were less compact, and open-reel tape, which required threading.

Open-Reel Magnetic Tape

Before 1956, the regionals had been acquiring volunteer-produced books on open-reel magnetic tape and integrating this service with the circulation of braille and talking books provided by the federal program. To provide specialized materials and to fill in gaps in the collections, in Fiscal 1959 the division began acquiring volunteer-produced master tapes and duplicating them on request for loan to readers. By then virtually all the volunteer groups had switched from embossed discs to tape recording. The following year about thirty titles were available for national circulation and the division often assigned titles to volunteer narrators, supplying them with the print books and blank tapes. By July 1961, the collection consisted of about 350 volunteer-produced master tapes and some 1,200 AFB and APH tapes, all the master tapes for talking books mass-produced in the previous 3½ years. The latter allowed the division to reissue titles without having to rerecord them when the talking-book program was converted to 16⅔ rpm. In Fiscal 1962 the division began distributing open-reel submasters to regional libraries on a regular basis for duplication as needed.

The economics of open-reel magnetic tape lent itself particularly well to periodicals; older issues could be erased to record new ones. Nine magazines were available in Fiscal 1962 and more were later added, often specialized titles with limited appeal. Among the books included in the collection were Jaspersen's *Growth and Structure of the English Language*, Deutsch's *Psychology of Women*, Shaw's *Fabian Essays on Socialism*, Camus's *L'Etranger*, Kazantzakes's *Zorba the Greek*, Bradbury's *Martian Chronicles*, Neill's *Summerhill*, Marlowe's *Jew of Malta*, and Jiménez's *Platero y yo*, recorded in Spanish. This edition of *Platero y yo* was the publication that made Jiménez eligible for the 1956 Nobel Prize for literature, which he won.[202]

In 1964 procedures and standards for evaluating volunteer-produced tape masters were prepared. The next year the division began providing technical assistance to help volunteer groups improve the physical environment in which they recorded. By July 1965, the collection included some 2,400 volunteer-produced titles, circulation at the regional had almost doubled since the previous year, and tape-recorded editions of *Braille Book Review* and *Talking Book Topics* were begun on a regular basis.

Provided recording standards were maintained, volunteer-produced open-reel magnetic tapes, unlike embossed discs, were a considerable boon to the division. It had not succeeded in developing a talking-book machine which would satisfactorily play both the program's hard discs and the various embossed discs produced by volunteers. For open-reel tape, however, patrons used their own commercial machines, which meant no production and no repair problems for the division. Volunteers donated their labor and either owned or had access to recording equipment. Therefore open-reel-tape books cost relatively little. And the medium allowed excellent inventory control; with discs, the division was more or less tied to the number of records pressed at one time, but tapes could be either erased or duplicated. And tape permitted production of reading materials that appealed to limited audiences as opposed to the wide-appeal criterion for mass-produced discs. The program was not without drawbacks, most notably the difficulty blind readers had threading open-reel tapes. Patrons often returned containers full of unwound tape to the libraries. Nevertheless, the open-reel collection represented a useful interim stage during the development of a cassette system.

Handcopied Braille

The increasing emphasis on volunteer-produced materials which began in the late 1950s extended to braille transcription. The division issued lists of groups and individuals who brailled and recorded books and in Fiscal 1963 began publishing the directory *Volunteers Who Produce Books* in print and braille. When "a distinct variance in preferred language usage" in the United States and the United Kingdom led to "separate, though basically similar, codes designed to apply to the English language as practiced in each country," the division made available the resulting *English Braille, American Edition, 1959.*[203] And in Fiscal 1963 the division made arrangements to duplicate by the Thermoform process the more significant handcopied books for distributing to selected regional libraries, multiplying the effect of their transcribers' efforts.

Selection

The division's selection policy was constantly improving. A number of books it produced later became bestsellers, appeared in compilations such as "Good Reading," or won awards. For example, the 1962 and 1963 Pulitzer Prize–winners in both fiction and nonfiction and the Newbery Award–winner in 1962 won on the basis of books already selected for the program.

The division began to stress specific areas annually; for example, titles for juvenile readers and young adults in Fiscal 1960, vocational literature in Fiscal 1964, and Broadway plays and American poetry on discs in 1965.

The division received a grant from the National Aeronautic and Space Administration to produce in both braille and recorded formats five books in the Vistas of Science series and current editions of *NASA Facts* and several pamphlets on space travel. The Food and Drug Administration provided funds for recording a publication exposing quackery, *Your Money and Your Life,* intended especially for older citizens. Other federal agencies using their own funds to provide their publications in a form accessible to blind people was a real breakthrough.

For books of high current interest, speedy production was important. In Fiscal 1959, the highly popular *Dr. Zhivago* was ordered, produced by APH, and on library shelves in two months' time; it was the largest talking-book edition the division had produced, 251 copies. In Fiscal 1965, *The Report of the President's Commission on the Assassination of President John F. Kennedy* was produced in braille and talking-book editions within a few weeks of the print publication.

By March 1966, the division could say there was no controversy about selection for the general collection: there was some disappointment because not everything could be produced, but the problem was economic, not philosophical.

Work on the children's collection progressed. In Fiscal 1961 the division was making headway on a basic list of 500 juvenile titles and the American Textbook Publishers Institute gave blanket copyright permission, as did the Children's Book Council three years later. An increased appropriation for braille permitted the division to add *American Girl, Boys' Life,* and *National Geographic* in Fiscal 1963. The next year, *Jack and Jill* was added in recorded format to supplement the long-established braille edition. In Fiscal 1965 the division began producing children's picture books in PRINT/BRAILLE. That is, the braille transcriptions of the text were interleaved with the original print pages and illustrations, allowing blind parents to read them to sighted children and blind children to have the same physical text as sighted children. The following year, the Boy Scouts of America paid half the costs of recording the Boy Scout Handbook, for which volunteers produced Thermoform facsimiles of symbols and badges.

Access

In 1964, the division assumed greater editorial control over *Braille Book Review* and *Talking Book Topics,* the two periodicals that announce new titles. To increase their usefulness to patrons, the print editions were published in larger format and larger type and books were listed by title rather than author. BBR listed only braille books and TBT only recorded books, but a combined braille edition was available. New features included an index, a student's section, reprinted articles, book reviews, and articles about regional libraries, narrators, authors, and other subjects of interest. Short bibliographies were added the following year.

For both talking books and press-braille adult books, the program had initially followed a repetitive pattern of annual catalogs periodically gathered into cumulative catalogs, the last of which covered 1934 to 1948. As the collections grew, however, describing them in single catalogs became impractical. The division began producing a series of catalogs listing books produced over two- to five-year periods through the 1962–1963 cumulation. And in Fiscal 1962 it issued a cumulative catalog for press-braille books produced between 1948 and 1954. This catalog filled the gap so that a complete set of catalogs described all the books produced. Because the older records did not play well on the newer machines, in 1958 the division issued a cumulative catalog of talking books which was not a true supplement; it included only microgroove records, produced between 1953 and 1957. In the mid-1960s, it issued annual indexes to *Talking Book Topics* and *Braille Book Review* in alternating years between two-year catalogs.

For a time beginning in Fiscal 1939 catalogs of braille books were brailled as part of the collections and could be borrowed from regional libraries. When the division resumed brailling catalogs in the late 1950s, they were made available on request from active braille readers and could be retained by them.

Catalogs for both braille and recorded books for juveniles were brailled. In fact, *Juvenile Braille Books*, cumulative since January 1, 1953, published in Fiscal 1959, was one of the first braille editions of a catalog of braille books in over ten years. Its companion catalog, *Talking Books for Juvenile Readers*, also cumulative since January 1, 1953 and published in Fiscal 1959, was the first catalog produced in large type, a practice that was so well received that it became standard for all publications for patrons. In 1962 the postal laws added materials in large print, 14-point type or larger, to items for blind people that could be mailed free.[204]

The division also issued catalogs of volunteer-produced books. It published a supplement to the union catalog of handcopied books in 1960 in print and braille editions, a list of some 4,200 titles. Patrons were informed about the open-reel magnetic tape collection first through short multilithed lists and then, in 1961, by *Books on Magnetic Tape*, available in large print and braille.

The division's first separate bibliography was published in 1960, *Reading for Profit*, an annotated list of books in press-braille and talking-book format on the general theme of self-improvement: vocational training, personal adjustment, and economic advancement. The braille edition was available by July 1961. This bibliography proved so popular that it was revised, in part to include open-reel magnetic-tape titles, and reprinted in large print in Fiscal 1963; the braille edition was transcribed by volunteers in prison and made available by the division. The tape edition followed the next year. *Books for Pleasant Reading: An Annotated List of Talking Books* was published in large print in 1961, and *Counseling and Rehabilitation: A List of Books Recorded on Magnetic Tape* in 1962.

The 1966 standards called for sufficient comprehensive annotated catalogs to meet the personal needs of each reader and to serve as reference tools for librarians, a union catalog of all materials available for blind readers, a means of browsing to select material, and analytic on-request bibliographies. All but the last were fairly well provided.

Music

When the Library of Congress opened its Reading Room for the Blind in 1897, it had on hand a little embossed music. Its sources limited to gifts, APH deposits required by law, and volunteer transcriptions, the division in 1962 had only a "small and fragmentary" collection of embossed music. No other library's collection was adequate. Volunteer braillists in this field were relatively few and their activities not coordinated; moreover, handtranscriptions took a long time. Finally, there was no central listing of what was already available.[205] On October 9, 1962, President John F. Kennedy signed into law an act which established in the division a library of music scores and other instructional music materials for blind people.[206] The act does not include music for listening pleasure. This legislation offered the hope of much improved service to the serious blind musician.

Although no additional funds were appropriated the year the legislation was enacted, favorable prices offered by APH and the Howe Press allowed the division to acquire their entire stock, about 8,000 items, due to economies it effected elsewhere. By July 1964, the collection included most of the scores produced by the braille presses in Europe as well, a total of about 19,000 titles. Acquisition of further suitable materials—in areas such as folk music, modern music, modern texts, and scores for accordion, guitar, and woodwinds—depended on volunteers, most of whom were not yet trained in the complexities of braille music notation. In the mid-1960s several of the large music publishers granted blanket permission for brailling their publications. In Fiscal 1965, the division made arrangements for tape recording instructional works with musical illustrations and began working on a union catalog of braille music scores and texts to facilitate coordinating the work of volunteers throughout the country.

The Physically Handicapped

On July 30, 1966, President Lyndon B. Johnson signed Public Law 89-522, which extended the division's services to people with physical handicaps other than blindness who are certified by competent medical authority as being unable to hold, handle, or read conventional print materials because of physical limitations.[207] Thus the law extended eligibility to people who have no arms or fingers or who are in iron lungs, and those who have muscular dystrophy, multiple sclerosis, cerebral palsy, Parkinson's disease, or other crippling disease. People with such disabilities had not previously had access to library services. The division was serving about 25 percent of an estimated 400,000 blind people. If the same proportion of newly eligible people, estimated to number 1.5 million, applied for service, the number of patrons would increase by almost 400 percent. In addition, in 1970, the Library of Congress modified its regulations to make eligible for service people with a "visual disability, with correction and regardless of optical measurement with respect to 'legal blindness,' " are certified as unable to read normal printed materials.[208] Such an expansion of service had ramifications for every aspect of the program.

The extension of eligibility had been discussed at least as far back as 1945, when other physically handicapped people became aware of library services being provided to service men blinded in the war. At hearings held in 1963, a number of organizations working for or composed of blind people had commented that such an extension would create all sorts of problems, ranging from copyright infringement to diminished service for blind readers. By the time hearings were held in 1966, however, these fears had been allayed for the most part. When it became apparent early in 1966 that Congress was interested in passing such legislation, the division increased the number of copies of each recorded title, building up a reserve to meet the expected demand. Copyright holders were cooperative, and, to assure that service to existing clientele did not suffer, Congress provided a supplemental appropriation of just under $1.5 million on October 27, 1966. The division increased the number of recorded titles produced by 25 percent and more than doubled the number of talking-book machines purchased, from 20,000 to 40,800. In 1967, service to physically handicapped people was facilitated when Congress changed the postal laws to add them to the list of those who could send and receive free mail.[209]

To inform new potential users of the service, the division actively participated in conferences of the National Muscular Dystrophy Society, the United Cerebral Palsy Association, the Council for Exceptional Children, the National Society for Crippled Children and Adults, and other organizations. Initially, about 1,000 new readers applied for service each month, including previously eligible blind people made aware of the program by the publicity.

To prepare for the expanded service, the division sponsored the first joint meeting of regional and state librarians in November 1966. Division management participated in each of the nine regional conferences of state librarians sponsored by the U.S. Office of Education to discuss library services to physically handicapped people. And in February 1967, the division sponsored a joint meeting of heads of machine-lending agencies and regional librarians.

As the collections grew, regional libraries began to suffer shortages of space, staff, and operating funds. To help the states expand services, Congress had amended the Library Services and Construction Act (LSCA) in July 1966.[210] It made funds available to states under Title IV-A for library service to residents of state institutions, some of whom were eligible for the program, and under Title IV-B for library services to blind and physically handicapped readers. As a result, in 1966 each state received $39,000 for residents of state institutions and about $26,000 for blind and physically handicapped persons. Delays in implementing the act and inadequate Title IV-B funding did little to alleviate the regional libraries' problems. Several regionals and machine-lending agencies were not prepared to extend services to the new clientele immediately; in the interim, the division provided direct service in such areas. In 1970, Titles IV-A and IV-B were combined into Title I of the LSCA.[211] Since then, the pattern of funding has varied greatly from state to state.

By Fiscal 1973, ten regional libraries depended on LSCA funds for at least half of their total budget; seven used them for operating expenses to some extent. By the mid-1970s, states applied such funds in a variety of ways to begin or improve library services to handicapped people. Some conducted statewide studies and plans, user surveys, or renovation of facilities. Others installed WATS service or purchased reading aids for exhibit or loan to patrons, tape duplication equipment, large-print books, blank tape, or subchannel radio receivers. Some states established or automated regional libraries and others supported subregional libraries—local, usually public, libraries that serve specified parts of the regional's territory. When LSCA funds were later reduced, many states and communities assumed part of these costs, while others did not.

LSCA funding provided a major impetus to development of the network. In 1966, the program's materials were being circulated by 32 regional libraries. By the end of Fiscal 1973, there were 50 regionals and 72 subregionals. Eight years later, the corresponding numbers were 56 and 101.

The division itself underwent change as a result of the extended service and in continued response to the St. John survey. On August 26, 1966, it became the Division for the Blind and Physically Handicapped. The number of its authorized permanent staff positions rose from thirty-eight in Fiscal 1966 to fifty-four in Fiscal 1967. In February 1967, the division moved some five miles to an annex where enough space could be provided for staff and the collections. In April 1973, the Martin Luther King, Jr., Memorial Library, in Washington, D.C., took over regional service for District of Columbia residents. After Maryland assumed responsibility for braille service to its blind residents in October 1977, the division provided direct service only to U.S. citizens living abroad and music patrons. In June 1978, as part of the first major reorganization of the Library of Congress since the early 1940s, the division was restructured and renamed the National Library Service for the Blind and Physically Handicapped (NLS), the name and abbreviation by which it will be referred to throughout the rest of this history. Its budget grew from slightly more than $4.5 million for Fiscal 1966 to almost $10 million for Fiscal 1974 to $33.4 million for Fiscal 1983.

Extending service to physically handicapped readers had a pervasive influence on NLS internal functions. It necessitated an increased responsiveness to consumer needs and affected research and development; and the rapid growth of the program led to automating operations, an expanded collection and improved support services to the network of cooperating libraries, better utilization of volunteers, more outreach activities, and recognition of the need for international cooperation.

Consumer Relations

Between 1966 and 1983, the number of blind and physically handicapped library users more than tripled. Also during this period, the complexity of products and services increased and the needs of readers became more diverse. NLS learned about consumer needs through the thousands of letters and telephone calls received each year, as well as through studies and surveys, staff attendance at consumer meetings, and consumer advisory committees which make suggestions to network libraries. To assure that users' views and needs were systematically taken into account in all facets of planning and program development, on June 2, 1980, NLS established a Consumer Relations Section.

Consumer advice has long been sought on book selection and equipment design. Since 1976, the ad hoc advisory group on collection-building activities, composed of consumer and network librarian representatives, has met each year to advise NLS on selection priorities. The committee does not select specific titles but recommends general guidelines within which selections are made. Another consumer group has worked with NLS intermittently on development of a machine capable of playing both discs and cassettes. Consumers have frequently participated in reviews and tests of other equipment and related products. In 1976 groups of consumers began regularly assisting NLS with its public education programming, by reviewing radio and television materials aimed at recruiting new readers.

Since the late 1960s, consumers have, as individuals, had an opportunity to help determine which magazines are selected for the program. Any library user can subscribe to *Magazine of the Month*, which is recorded on disc, or *Magazine of the Quarter*, which is produced in braille. The primary purpose of these two publications is to give blind and physically handicapped subscribers an opportunity to browse through sample periodicals that are not usually available in special format. In addition, NLS then surveys subscribers regarding their magazine preferences; it uses the results to help choose magazines to be added to the program when circumstances permit.

Research has become an increasingly important tool for evaluating the needs and opinions of consumers. For example, three extensive surveys commissioned by NLS have provided significant direction for the Library of Congress program since the late 1960s.

A study conducted by Nelson Associates, Inc., in 1968, focused on users—who they were, what special circumstances shaped their library needs, what they read and what they wanted to read.[212] The study was based on a random sample of print and braille questionnaires completed by subscribers to *Talking Book Topics* and *Braille Book Review*, respectively, supplemented by interviews with a limited number of patrons.

Compared with the general population, NLS patrons were found to be better educated and older. Of the total readership, which included users too young to have done either, more than half had graduated from high school and one in six from college. The study report suggested that perhaps better educated blind and physically handicapped people were more likely to become patrons. Nearly half of the total readership had become unable to use conventional print after the age of fifty-five, and 34 percent were sixty-five years of age or older. One patron in five was a homemaker, and more than half of all readers were retired or unemployed.

In contrast, patrons responding on the braille questionnaire, taken as a separate group, were younger and more likely to be employed or in school. Nearly 60 percent had become unable to use conventional print before the age of fourteen and about 95 percent before the age of forty-five. A substantial proportion (42 percent) were between the ages of fifteen and twenty-four. Twenty-five percent were employed and another 40 percent were students.

Of the total readership, 98 percent read talking books. Among braille respondents, 63 percent had borrowed braille materials, and 88 percent talking books. The reader characteristics reported had implications for format and equipment development. Older patrons tended to prefer talking books and talking-book machines. While many readers probably were unfamiliar with cassette machines, among the few readers who had access to them, more than half said they would prefer cassettes to any other format, despite the fact that they had not had the opportunity to borrow any cassette books. Patrons who were younger, employed, or better educated, and those with more specialized reading interests were more likely to use tape recorders.

Readers who had obtained materials on tape gave substantially higher ratings than did the total readership to books which treated sex and violence frankly, outstanding nineteenth- and twentieth-century authors, history, philosophy, instructional materials, essays, and special-interest magazines. The reading needs and preferences of older readers were different, but not sharply different, from those of other groups. Such patrons tended to be less interested than younger readers in instructional or how-to materials, special-interest magazines, science fiction, books which treated sex or violence frankly, and vocational, technical, and professional materials. The survey report warned, however, against stereotyping older patrons, pointing out that, having become handicapped late in life, they had developed a wide diversity of reading needs and tastes. The problem in book selection was to do the best possible job in meeting diverse reading needs without shortchanging the interests of the majority of readers. Inasmuch as they tended to give both selection and service a "very good" rating, older patrons either were being well served or were a less critical, more appreciative audience. In any case, four subject categories were rated "very important" by more than half of the readers: general-interest magazines; current events, news, and popular culture; pleasant novels, family stories, and light romances; and bestsellers.

Among the comments made in patron interviews were a number of suggestions subsequently addressed by the division, including a means of transferring eligibility from one library to another, a way to locate a book without knowing the full title or book number, more historical novels, better reference service, an effective interlibrary loan system with a reasonably fast way to check other libraries' holdings, a union catalog, personal copies of magazines, more frequent cumulative catalogs, a machine that could play both discs and tape, standardized needles, four-track tapes, and automatic shutoff for talking-book machines.

The survey found that half the patrons learned of the program first through friends or family and another 43 percent through a school, hospital, or other institution. Very few readers reported first hearing about the service through publicity, although clearly some of their friends and families may have learned of it in that way. Since more than 70 percent of the patrons had a vision handicap alone and less than 4 percent had a physical handicap alone, it was apparent that public education methods then in use were not reaching the physically handicapped population. The study report recommended that television, radio, and public libraries be used to reach into local communities and that the division consider adding a full-time media specialist to its staff to advise and assist regional libraries with their public education programs.

The report also recommended establishing a machine-record data file on reader characteristics. Such a system could be used to facilitate transfer of eligibility to another library, purge no longer eligible readers from the lists, update patron addresses, and supply statistics pertinent to book selection. Other recommendations included establishing uniform statistical reporting, and finding a way to handle less frequently used materials, possibly through "superregionals" operating on a contractual basis with other regionals in a multistate area and public libraries' involvement in meeting patrons' reference needs.

A nonuser survey, conducted in 1977 by AFB with a random sampling of households and institutions nationwide, was designed to determine the number and characteristics of potential users and their awareness of the program. The contractor's report was submitted in the fall of 1980.[213]

Among the most significant findings were: 3.1 million people in the United States were eligible for the program; 2.6 million of those identified lived in households and 0.5 million were in nursing homes, hospitals, or schools for handicapped individuals. Two-thirds of the total number had a visual impairment; the rest had a physical handicap. Forty-seven percent were sixty-five years old or older, as compared to 11 percent of the country's population. Nearly 75 percent had serious chronic health conditions other than those affecting their ability to read conventional print which could inhibit their use of the program, such as an inability to use the telephone or operate a record or cassette player. Seventy-five percent had done some kind of reading in the previous month and of them about half had read regular print, often using low-vision aids. Print was the preferred medium for about half of the print limitation population that read. Eighty-five percent of the eligible population had never used the program, but 65 percent of these had some awareness of the program. Four-fifths of the remaining 15 percent were current users and one-fifth were former users.

Significant differences were found between users and nonusers. Users more than nonusers tended to be younger, white, better educated, white collar professionals, healthier, more mobile, with fewer specific reading limitations. They read more, were more independent readers, and were more likely to have been library patrons before the onset of their handicap. Nineteen percent of users also read regular print, whereas more than 70 percent of nonusers did. As many as three-fourths of the users were certified as legally blind, while only 20 percent of the nonusers had obtained such certification. These last findings suggested that there was a strong association between certification and readiness to accept and use special reading services and also between getting certified and becoming aware of or being referred to NLS.

The nonuser study showed that 43 percent of the eligible population had never heard of the NLS program. Of those who were aware of it, a little less than 40 percent first heard of it from friends or family, one in three of whom were themselves print-limited. One in four first learned of the program through public service announcements on television or radio or articles in newspapers or magazines. The rest first heard of the program from such sources as special schools or classes, rehabilitation programs, clubs and organizations, health services, or libraries. The study noted that, although health care professionals were in an ideal position to refer people, they had a poor track record.

Of the nonusers, about one-fourth, conservatively estimated, expressed an interest in NLS services. The greatest interest was indicated by parents of children with dyslexia and other learning problems, who tended to be less aware of the program and whose children's eligibility falls under the NLS rubric "reading limitations stemming from 'organic dysfunctions,' " the causes of which are often difficult to assess clinically. Blacks also showed a strong interest in trying the program, although they tended to be less familiar with it than were whites. Interest was also expressed by many people with primarily physical limitations in reading and by older persons who had nonreading physical problems in addition to their visual limitations, but people in these groups often indicated they were unable to operate the disc and cassette players by themselves.

The study report recommended that equipment be made easier to understand and operate and more responsive to the needs of those who are elderly, frail, or multiply impaired and that high-interest, low-vocabulary titles (because of nonusers' lower educational level) and shorter materials (because of their poorer health) be added to the collection. And it endorsed and urged the expansion of the NLS public education program using public service announcements.

Several persistent problems were discussed in the study. It noted the resistance to print alternatives on the part of many people who needed them. It found, for example, that most people who sought print alternatives did so within five years of the onset of their limiting condition and that if they were not motivated to do so then they tended not to use them at all. It noted the lingering image of NLS as a program strictly for blind people. That only 2 percent of users did not have visual impairments was due in large part to the absence of a network of organizations for people who were physically handicapped or learning disabled comparable to that consisting of active rehabilitation agencies and established advocacy groups of and for blind people, which were two of the major NLS referral sources. It noted the difficulties involved in serving institutionalized eligible people. While 86 percent of the institutions were aware of the NLS program, most staff thought only totally blind people qualified. While 24 percent of the residents of institutions read with recordings, probably as many as 50 percent would qualify for service. The survey found staff and administrators indifferent to the program, often considering reading a private or antisocial activity not to be encouraged particularly, its only advantage over television being intellectual stimulation. Successful NLS programs in institutions were associated with a staff member who championed the service and with an effective organizational mechanism for systematically ordering and distributing materials and equipment. Expansion of service to institutions would require innovative techniques, such as developing volunteer or self-help mutual aid programs, and regular personal contact with and continual training and encouragement of staff, due to high turnover. The report also noted that informational needs, including professional and research materials, of users were not being met by other alternatives to print.

Data about users gleaned from the nonuser study were further investigated by a user survey conducted in 1979 and reported in 1981 by Market Facts, Inc.[214] Updating the 1968 user study, the survey was intended to collect more current information about patron characteristics and attitudes toward specific aspects of the program. Ten thousand readers were surveyed by mail, with questions in large-print format. A response was obtained from more than 40 percent of those sent questionnaires.

No sharp changes in readership had occurred. Different sampling methods and survey instruments precluded precise comparisons, but some relatively minor shifts appeared to have taken place. Since 1968, the proportion of patrons over age 64 and of users with a physical handicap alone had risen. The proportion of users in institutions had risen since 1979. Braille readership and the proportion of nonwhite patrons had fallen since 1968.

The 1981 study found that almost equal proportions of users learned of the program from friends and relatives (37 percent) and schools, libraries, or organizations serving people eligible for the program (35 percent). Hospitals, nursing homes, doctors, and nurses informed about 14 percent. The rest first heard of the program from public libraries, social service organizations serving the general public, the media, and other sources.

Although patrons tended to be well educated, their incomes were low (almost 60 percent under $10,000), due to the large number of retired or unemployed persons. The four most popular categories of reading subjects were bestsellers, historical fiction, humor, and biography, closely followed by history, detective and mystery stories, and literature. Only 14 percent of users had ever visited their libraries in person; two out of three attributed this to the distance involved. More users of subregionals (20 percent) than of regionals (12 percent) had visited their library. Sixty-eight percent of subregional patrons rated service as excellent as opposed to 56 percent of patrons using regionals. And 70 percent of subregional patrons reported their book orders were filled quickly as opposed to 60 percent of regional patrons.

Among the report's recommendations were encouraging subregional systems and developing a campaign to attract nonwhite, less well educated, and lower-income readers. To alert readers to the presence of strong language or frank descriptions of sex or violence, the report suggested narrating annotations at the beginning of recorded books, a practice NLS adopted even before the final report was submitted. And the study confirmed the need for NLS efforts to develop an easy cassette machine and to produce extension levers for cassette controls.

NLS conducts various specialized surveys from time to time. For example, in 1982 a survey measured the interest in a small, lightweight cassette player. Another survey is in progress in 1983 to measure present and past use of braille books and magazines produced by NLS. NLS expects to use the information from the latter survey to improve the selection, production, and distribution methods of braille materials in the coming years.

Responsibility to consumers and close and frequent communication with consumers were stressed by the 1979 ALA standards for library services for blind and physically handicapped people. Focusing on the entire NLS network, the standards delineate criteria for every aspect of the program to ensure effective library service.[215] The standards were considered benchmarks, reflecting contemporary practice in many network libraries. By definition, then, such standards were a point of reference from which measurements may be made, and NLS contracted with Battelle Columbus Laboratories to conduct the first nationwide review of a type of library—libraries for blind and physically handicapped readers—in relation to a set of standards promulgated by ALA. The study has a two-fold purpose: to test the validity of the standards as a tool for measuring services and to arrive at a true picture of the success of the service nationwide. Battelle visited and evaluated NLS, the fifty-six regional libraries, and the four multistate centers, and is producing a comprehensive, objective, state-of-the-network report with comparative data for libraries of similar size and scope. Meanwhile, the standards are used in virtually every aspect of NLS operations to further the philosophy of the national program that users of network libraries shall have access to library services equivalent in extent and quality to that available to the general population.

Research and Development

In 1966, braille books were being produced largely by the same laborious methods that had been used for decades, the few magazines that were available were circulated on loan, and patrons had access to a standardized type of talking-book machine. By 1982, most braille books were being transcribed by computers, magazines in braille or on flexible discs were mailed to patrons directly from the producer and were theirs to keep, patrons were using both disc and cassette playback machines, and a "family of machines" was on the horizon.

These vast changes came about through a continuing research and development program whose two major elements are perfecting existing products while at the same time considering and testing other products with potential for the future. NLS has developed new materials and machines for the program primarily by adapting technological advances in other fields to the needs of blind and physically handicapped readers. Such technology can be used only when it is sufficiently advanced for the costs to be suitable for mass-production materials.

Recorded Materials

In the years immediately following the extension of service to physically handicapped people, NLS emphasized recorded materials, producing unusually large numbers of machines until people in the newly eligible group were receiving adequate service and demand for machines leveled off.

At the same time, research continued to develop machines that were lighter in weight, sturdier, easier to operate, and more attractively designed. In Fiscal 1968, a new, lightweight, fully transistorized talking-book machine, model AE-5, was produced in a sturdy but attractive plastic carrying case. The two-speaker system, with one speaker mounted in the detachable lid which could be placed up to eight feet away from the machine, improved the distribution of sound.

Experimentation with production of 8⅓-rpm discs continued in an effort to provide more reading material in less space. The 8⅓ speed had been provided on all new machines produced since 1965, and by

1969 all older two-speed machines in use had been converted to three speeds through the volunteer efforts of the Telephone Pioneers. In 1969 all recorded-magazine production was converted to the 8⅓ speed, which provided up to 2½ hours of reading time on twelve-inch discs. The format was generally well received, although there were some problems because of the closeness of the grooves, which sometimes caused the needle to skip and made it difficult for readers to locate their place after the needle had been removed.

Concurrently, the reading format that was to have the greatest long-range effect on the program was introduced when 1,000 commercially available cassette machines were purchased for evaluation. The greater portability and economy of cassette machines as compared to talking-book machines promised to increase the capacity of library services greatly. To test readers' acceptance of the cassette format, 150 titles selected from the 1964–1965 catalog of talking books were made available through a new catalog sent to approximately 1,000 readers participating in a six-month survey. The response was enthusiastic, so in 1968 the first cassettes were added to the program, many of them commercially produced, especially children's books. Within three years, *Talking Book Topics* had replaced its open-reel magnetic-tape section with a listing of cassettes.

By 1971 cassette playback machines had been produced applying NLS specifications to adapt General Electric machines to program needs. The machines had rechargeable batteries and two playback speeds: 1⅞ ips, the commercial speed, and 15/16 ips, the speed proposed for NLS material. The slower speed would permit NLS to put three hours of recorded material, rather than the usual ninety minutes, on a single cassette. Machine controls were marked with raised characters to facilitate operation by blind and physically handicapped people.

Volunteers did all the narration of books for the cassette collection; NLS contracted only for the duplication. A significant number of volunteer-produced titles were added to both the national and the network library collections. In 1971 alone, eight new volunteer taping groups were started. Duplicating cassette titles strained the resources of the contractors, APH and AFB, and NLS continued to supplement its collection with commercially produced material.

When volunteers submitted tapes of unequal lengths for duplication, NLS solved the problem initially with timing devices and later with pretimed tapes. Because of the need to standardize volunteer-produced material, NLS then prepared a set of instructions for recordings that became the basis for formal specifications for contractors and volunteers alike. By 1972, NLS had opened its own recording studio with a volunteer director in charge of recording activities and of auditioning other volunteers to serve as narrators. Since 1973, both director and staff have been paid for their services.

Improvement of the original talking-book (disc) format continued as the new cassette format was introduced. The 40,000 new disc machines that had been acquired in 1969 were improved over previous models. Refinements included moving the speed-control mechanism and the on-off switch, adding an attachment jack, and restyling the volume and tone-control knobs. A solid-state amplifier provided an "instant-on" feature, so the machine could be turned off and on again without removing the needle and without losing more than a syllable of the text. Accessories, including variable-speed and remote-control devices and earphones, were ordered.

In Fiscal 1972, NLS postponed procurement of new cassette machines in favor of the purchase of an additional 24,000 A-71 model talking-book machines to fill the greater-than-expected demand. NLS also took delivery on 2,000 B-71 battery-operated talking-book machines, purchased 500 B-71A machines for use by readers overseas, and contracted for production of 21,000 new model machines, the A-72, which incorporated a more compact casing.

In Fiscal 1973, a new model cassette machine was designed to NLS specifications and 30,000 were ordered for the following year. Besides the two playback speeds of previous machines, the design incorporated four-track reproduction, which could provide up to six hours of playback per C-90 cassette. The new machine also could accommodate tone-indexed tapes and a speech compression attachment—two features that did not become practical for production for several years.

Studies began for further improvements to be incorporated in later models. An automatic-reverse cassette deck was developed, adapting an existing commercial machine. With a four-track cassette, this would allow six hours of unattended book playback. Included was a "touch plate" remote control that would stop and restart the tape whenever desirable. This type of unit was considered mainly for use by bedridden patrons in institutions. However, the size and cost of the deck prevented production. Studies also began on a plug-in phonograph deck for cassette machines so patrons would not need both a cassette and a disc machine. The deck, which was to consist primarily of a turntable and tone arm with a variable-speed control, was envisioned as an inexpensive accessory. The advantages it offered over two machines would be smaller size, less weight, and lower unit cost.

In 1974, however, extreme shortages of basic materials—electrical components, plastics, and all petroleum derivatives—slowed advances in machine production. To meet the immediate need for equipment, efforts turned to repairing and bringing back into service all machines possible, regardless of model. New disc machines were distributed according to proven need upon request of patrons. Cassette machines were distributed to network libraries in proportion to the number of readers served by each state.

Meanwhile, the C-73 cassette machines had been produced and distributed and were available to accommodate the new cassette format. In 1974, the first cassette book recorded at a speed of 15/16 ips was produced. A user study of four-track cassettes, similar to the first survey of cassettes, was conducted in Fiscal 1975 and led to the production two years later of the first four-track mass-produced cassette book, *Roots*, by Alex Haley, which was ready shortly after the television series aired.

The cassette format was not without problems—for example, tape spilled from the cassette fairly frequently, fouling the machine and discouraging some patrons. In 1975 NLS began quality-assurance inspections to verify contractor compliance with procurement specifications for cassette and disc machines and materials, as well as failure analysis programs to improve reliability. In 1976 containers were redesigned to reduce handling damage to the tape path on the exposed side of the cassette case. Beginning with the C-76 playback machine, all cassette models have been built with a tape-motion sensor that shuts off the machine whenever the cassette take-up reel stops. In 1980, after a detailed study of the causes of spillage, using slow-motion photography, the chemical composition of the binder holding the magnetic material to some tape was found to contribute to spillage causes and tests were devised to cull out such tape and prevent its use.

Throughout the years, NLS has given considerable attention to the packaging of material. Containers for materials sent through the mails must be sturdy enough to survive rough handling yet as lightweight as possible; container labels must be readable through touch as well as sight. The first plastic cassette containers, which were as large as the containers for rigid discs, were much lighter than the cardboard containers used in the early years of the program but were awkward to handle and larger than necessary to hold cassettes. A smaller container that allowed the cassettes to be stacked rather than shipped in a single layer was field tested in 1972 and has subsequently become standard. Other improvements have been made to provide greater protection for the cassette tape and to develop a latch that is easy for patrons to open yet secure enough for mailing.

Along with the development of the cassette format, NLS was experimenting with the use of flexible discs, which seemed particularly appropriate for recorded magazines: multiple copies can be produced rapidly and inexpensively and are durable for the short lifespan needed for magazines. A format for direct mail was needed because of the great popularity of magazines and the number of magazine titles provided to serve readers. By Fiscal 1970, network librarians were spending 40 percent of their time circulating loan copies of magazines. To relieve them of this burden and to get magazines to patrons in a more timely manner, direct circulation was essential—in a usable format and at a reasonable cost.

The first flexible disc used by NLS was bound into *Talking Book Topics* as an experiment in 1968 and contained announcements of new books available. The format proved overwhelmingly popular, and by 1970 the disc contained all the material in the print publication—news and feature articles as well as book announcements. After the satisfactory experience with *Talking Book Topics,* NLS signed contracts with APH and AFB to develop a flexible disc to be used for direct-mail magazines. In 1972, three magazines on 8⅓-rpm flexible discs began direct circulation; in the same year, the first book on flexible disc, *Wheels,* by Arthur Hailey, was produced.

A study conducted in 1975 by Innovative Systems Research of Pennsauken, New Jersey, under contract with NLS, affirmed the advisability of an orderly conversion of recorded books from rigid discs to cassettes and of recorded magazines from rigid discs to flexible discs. The researchers offered several plans for achieving the conversion while meeting user requirements, including expediting the upgrading of machine and book production specifications and pursuing the development of a combination disc-cassette player.

The conversion of magazines was completed in the late 1970s and all recorded magazines available nationwide through the NLS program are mailed directly to readers on 8⅓-rpm flexible discs, except for two NLS-produced music magazines which are sent direct mail on cassettes. In Fiscal 1982, almost 5.5 million flexible-disc copies of magazines were shipped directly to patrons. Cassettes have become the major book format for the NLS program because of their compactness, low cost, versatility, and ease of handling. Each four-track cassette contains up to six hours of reading, and additional copies can be duplicated by network libraries rather than having to be supplied by the producer. NLS expects to cease production of rigid discs, the original recorded format, at the end of 1983. Material recorded on rigid discs is being reissued on cassettes at the rate of 200 to 300 titles each year.

In 1977, NLS began a major effort to implement new and more rigorous quality control. Laboratory and field tests indicated that, as a result of design improvements and quality-assurance procedures, the C-76 cassette machine performed better and more reliably than the C-75.

In 1979, NLS introduced voice indexing with the production on cassette of *Access National Parks: A Guide for Handicapped Visitors*. Providing access to specific information in recorded materials has always been a difficult problem; if readers are to locate information efficiently, they require some kind of audible indexing system. This capacity is particularly important for reference material and related items, but it is also valuable for magazines, collections of short stories, and any grouping from which readers might wish to select one or more items.

The earliest solution to this problem was tone indexing, which became possible when talking-book machines offering more than one speed were produced. By recording an audible tone at the faster speed and the text at the slower speed, it is possible to listen to the tones at the faster speed and switch to the text speed for reading. For cassettes, the tones are audible when the machine is in the fast-forward mode, with the text recorded at the normal 15/16-ips speed.

Voice indexing uses key words (in the case of *Access*, the names of individual parks) that are audible in the fast-forward mode. When the key word is located, the tape is stopped and play resumed at normal speed to obtain the full information. Voice indexing not only permits many more access points than tone indexing but also defines these points more clearly. The key to the voice-indexing technique developed by NLS is a machine that blends the two tapes, one with the index words and the other with the text, with the precision necessary for smooth operation. Experience with several voice-indexed books has refined the process so that the goal of a voice-indexed dictionary, a reference work long needed by blind and physically handicapped people, is in sight. Narration of the *Concise Heritage Dictionary* began in 1980 and was completed in 1982 for the fifty-five-cassette dictionary. Production is expected to be completed in 1983.

Over the years a series of machine accessories was developed and refined by NLS. By 1982, patrons had access to an extension-lever system for cassette machines to allow easier operation by bedridden patients, a tone-arm clip for the disc machine for patrons with limited use of their hands or fingers, on-off remote controls for patrons with very limited mobility, headphones for private listening and for patrons with some hearing loss, and special amplifiers for patrons with severe hearing loss.

One accessory was developed in response to an unusual patron request. In 1979, an American citizen living "about a hundred dugout-canoe miles up the Amazon from Cucui (Brazil) " wrote for braille magazines and mentioned that she missed her cassette books but, because there was no electricity in such a remote area, she had no way to recharge the battery.[216] The product developed was a panel consisting of small silicon solar cells linked together that can operate the machine in direct sunlight or recharge batteries for use at other times. This accessory is now available on long-term loan for people living in remote areas without electricity, or on short-term loan for activities such as camping trips into wilderness areas.

Machine development has continued and in 1982 NLS announced the planned provision of an interrelated "family of machines," including three new machines to join the disc and cassette machines. Thus by 1984, five machines will provide alternatives to patrons to meet their different needs.

The combination machine is designed to be the basic machine for the program, with the capacity to play the cassette format needed for recorded books and the disc format for recorded magazines. The combination machine has been under development since 1977 and has undergone substantial modification from the original planning because of patron evaluations, improved technology in related fields, and planning for other machines. For playing cassettes, the combination machine introduces automatic side-switching through all four sides. At the end of each side, a motor reverses the direction of the tape and a head is activated to play in the new direction; a push-button device indicates the side being played by sounding from one to four tones. The machine incorporates features of the standard cassette machine, including controls for volume, tone, fast-forward, rewind, and variable speed. For playing discs, the combination machine introduces variable speed and the capacity to fast-forward and reverse direction for review of information—both previously possible only for cassettes. A new tone arm is equipped with a device for locating the edge of the disc or turntable and the grooves leading to the beginning of the recording. The tone arm is removed from the disc by pressing down rather than lifting up as on the standard disc machine; the downward pressure retracts the needle and prevents damage to the disc. With this tone arm, it is also possible to close the cover and move the machine without significantly changing the needle's position on the disc.

An easy-to-operate cassette machine is also being developed as the result of the Market Facts user study, which found that about 40 percent of patrons did not have a cassette machine, and that many patrons wanted playback machines that were simpler to understand and operate than the standard cassette machine. These two findings indicated the need for a more automated machine with a minimum number of controls. Like the combination machine, the easy machine has automatic side changing through all four sides. The tape rewinds automatically when the cassette is inserted into the tape deck; an audible beep signals when the rewind is completed and the tape is ready to play. There are only two main controls: a sliding switch that starts the machine and selects the volume in one operation, and a push button for review of information. No control is needed for ejecting the cassette; this operation is accomplished by sliding open the deck door and depressing the cassette.

The third new machine planned is a very small cassette machine for patrons, such as students, for whom portability is essential. This pocket-size machine will use rechargeable batteries and be audible only through lightweight headphones.

Technological advances in other fields indicate that in the future NLS will be able to provide machines that will be increasingly portable, reliable, longer lasting, and easier to operate. The key to achieving these goals is microprocessors—computer chips containing large-scale integrated circuits. These chips can be adapted for use in NLS machines by designing computer programs to perform functions previously handled by wired circuits. Microprocessors have the capacity to handle complicated functions, yet they are inexpensive and occupy little space.

Braille Materials

Braille was in 1966 and is expected to remain an important format for the small percentage of blind people who read it. This group is made up largely of people blind from an early age who use braille all their lives as the basic medium of literacy. The results of NLS efforts since 1966 to improve press-braille production have been much less dramatic than in recorded production, which benefited more from commercial technological advances. Only recently have possibilities for alternatives to traditional braille books been sufficiently developed to receive serious consideration.

Braille materials have traditionally had many drawbacks: an interpointed braille page contains only one-third to one-half the material of a print page, the pages are larger than in most print books, and the paper must be heavier to provide a good base for the braille dots.

Therefore, the paper is costly and braille books often run to several bulky volumes that are hard to mail and store. Also, traditional production methods for press braille require first obtaining the print book and then having it rekeyboarded on metal (usually zinc) plates by stereotype-machine operators skilled in the contracted braille code. The plates are then used on braille presses to produce multiple copies. Correction of errors on the plates requires hammering flat the braille dots that are incorrect and inserting corrections; when there are more than two or three errors on a page, rekeyboarding the whole page is faster than correcting the errors. The whole process is slow and cumbersome, and costs are high for the metal plates and for the personnel to produce them.

Over the years, these problems have been addressed by NLS and by the nonprofit organizations that produce braille books and magazines for the NLS program as well as for other purposes, by university research groups, and by corporations seeking applications of their technology to braille production. NLS braille research and development involves working extensively with these other groups, evaluating the existing technology, modifying it to NLS needs, and making or encouraging improvements.

Early efforts were devoted to developing an alternative to the manual method of embossing the plates used in the braille presses. In the early 1960s, APH put into production an automated process employing a computer, donated by IBM, that had been programmed to produce braille symbols and contractions. The system, which is still in operation, has a large memory capacity to deal with exceptions to general rules and with the use of contractions for letter combinations which depend on syllable division and sound. The print text still has to be keypunched, but the operator does not have to know the braille code; anyone trained in keypunching for the IBM system can apply that knowledge to the production of braille.

In the APH system, keyboarding is done onto punch cards, which are then proofread and corrected at a stage when changes can be made more easily than on the metal plate. The information on the corrected cards is then fed onto a magnetic tape used to drive the stereograph machine and emboss the braille characters onto the metal plates. The process works well for materials that are basically literary text, such as novels and general nonfiction works. Hand stereotyping is still employed for materials where decisions must be made about formatting, as for textbooks and books with considerable tabular material.

In 1969 an attempt was made to eliminate the keypunching step entirely through the use of compositor tape, the same punched paper tape used in production of the print edition. NLS, the Massachusetts Institute of Technology (MIT) Sensory Aids Evaluation and Development Center, and APH jointly sponsored an experimental production of *The East Indiaman*. Besides eliminating the keypunching step, this method held promise of more timely production because the tape would be available before the print book was published and an earlier start on brailling would be possible. When the book was produced by this method, however, it was discovered that the tapes used for print publication contained errors that later had to be corrected for both print and braille. Because of the number of corrections, the process was long and expensive. The cost of the project, plus the need for further development in print-tape technology, indicated that large-scale production by this method was not feasible at the time.

A decade later a breakthrough in the use of compositor tapes for computer input was made with production of the April 1979 issue of *National Geographic Magazine*. Since then, the magazine has continuously been produced by this method. This success was largely due to the improved editorial accuracy of the tapes used for print production. Only about 20 percent of print publications were produced by compositor tapes in 1979, but the process is expected to become widespread in the 1980s, and its potential for braille production to increase.

The success with the magazine was followed the next year by publication of *Helen and Teacher*, a dual biography of Helen Keller and Anne Sullivan by Pulitzer Prize–winning author Joseph Lash, written in honor of the 100th anniversary of Helen Keller's birth. The braille edition of the 786-page print book, produced through compositor tapes provided prior to print publication by arrangement with the publisher, was ready for distribution almost as soon as the print publication. In 1982, NLS began development of a program that can be used for production of a weekly news magazine by compositor tapes.

Another project involving computer technology was undertaken in 1972, this time testing the interface capabilities of several different systems to reduce costs and provide faster delivery. The project was undertaken in conjunction with MIT, with Howe Press as the braille producer. The book, *In Darkness,* by Roger Bourgeon, was put into a teletype for computer translation into braille and transmitted over telephone lines to MIT's Braillemboss, an output device for the computer. The magnetic tape required to drive the Braillemboss was converted to punched paper tape for use in Howe Press's stereograph machines, to produce the plates for multiple copies. The book was produced by this method, but the expected savings in costs and time did not materialize, and the process was not considered feasible for mass production.

The serious problem of rapidly rising costs in braille production came to a head in 1974, at the same time there was a crisis in production of recorded materials and playback machines. The general inflation led to shortages of braille paper and other materials, and there was a lack of skilled operators for braille stereotyping. To maintain quality and quantity as far as possible, NLS undertook long-range planning to survey braille users about their needs and preferences, developed an interim policy of maintaining the direct circulation of braille magazines to readers at the current level of production, and sponsored a conference with braille producers on May 17, 1974, at NLS. The conference discussed revised draft production specifications for braille books, which established uniformity for the product among all producers. The specifications were the foundation for acquiring books through competitive bidding, rather than assignment to various producers. Responses from a sampling of braille magazine readers obtained the following year showed that the decision not to reduce the number of magazines had been an accurate judgment of patron preferences.

By the mid-1970s, all braille printing houses under contract to produce materials for NLS had acquired some form of computer capacity and braille translation systems, although these differed in approach and production capabilities. Since the problem of finding trained stereotypists was at least partially solved by the development of computer systems, attention turned to more rapid production of the metal plates themselves. In 1976, NLS contracted with Triformation Systems, Inc., to design a high-speed plate embosser to operate in conjunction with computer input and braille translation systems. The embosser would operate in a manner similar to Triformation's line-embossing device (LED) for on-demand paper braille; that is, it would emboss single lines of dots across the plate rather than emboss the full braille character at one time. The resultant PED-30 (plate embossing device, 30 cells in width) was tested successfully at Clovernook Printing House for the Blind in 1978 and a second machine was installed at National Braille Press in 1979; Volunteer Services for the Blind acquired this capacity in 1980. The PED-30 accomplishes the plate-embossing step of braille production at from five to eight times the speed of manual stereotyping, although some compensatory time is required for inputting into the computer.

Researchers have continued their efforts to discover alternative methods for input into the computer to eliminate or reduce the amount of keyboarding needed. In the mid-1970s, Raymond Kurzweil of Kurzweil Computer Products introduced a print-to-speech reading machine. The machine combined a full-page optical scanner that could recognize more than 200 print fonts with a speech synthesizer that could translate print elements into basic sound elements and put these sounds together into somewhat stilted but recognizable speech. Under contract with NLS beginning in 1977, the Kurzweil company modified the reading machine to produce a data entry machine, which uses the scanning device for input into the computer and the standard Duxbury Braille Translation System for conversion to braille symbols on magnetic tape. The process does work to eliminate the keyboarding step, but the equipment is complex and much training and practice are required to use it.

An alternative to paper-braille books, introduced in the late 1970s, are braille reading machines that produce what is called paperless braille, electronic braille, or cassette braille. These portable machines store braille characters on cassette tape and produce them for reading as a line of braille cells created by raised pins activated by solenoid drivers. The user controls reading speed by activating the next line when ready. There are indexing features for finding information desired. These machines have the potential to solve some longstanding problems associated with braille: the size and bulkiness of braille books, plus the time and expense involved in producing them.

From 1979 to 1981, NLS conducted a study of these machines to determine user reaction to the concept and to specific features of the machines under evaluation, as well as features desirable for NLS machines should production become feasible. Using test groups of readers in five cities, the VSE Corporation of Alexandria, Virginia, conducted an evaluation of two types of machines for NLS: the Elinfa Digacassette, developed in France, and the Telesensory Systems (TSI) VersaBraille, developed in California. (A third machine, the Braillocord, developed in Germany was to have been included in the tests but had to be dropped when problems in producing digital braille cassettes could not be solved in a timely manner.) As reading material for the tests, five magazines that the NLS program regularly provides in braille were translated onto cassette tape by Clovernook Printing House for the Blind.

The study revealed that 72 percent of the participants approved of the concept of cassette braille but that the machines would require engineering modifications to reduce user fatigue and improve reliability. Moreover, costs rose rather than fell during the test period. The combination of high costs plus inadequate technology prevented further consideration of NLS production at that time.

In 1980, a new method of embossing images was developed in Japan. The photoembossing process uses heat and an expandable plastic foam to reproduce print materials in a tactile form. The height of a line or symbol is in direct relationship to the intensity of the visual image; the darker the print image, the higher the relief. NLS acquired the first machine outside of Japan and is exploring the application of this process to production of braille books containing material such as line drawings, maps, and graphs. Future possibilities include providing an alternative to Thermoforming for duplication of handcopied books and perhaps eventually providing braille masters that could be photographed and stored on microfiche.

With the rapid development of computer and other technology, in 1979 NLS undertook a full-scale study of the facilities and production methods of each of the four nonprofit organizations under contract to provide braille books and magazines for the NLS program, to discover areas where research efforts could best be directed. A four-volume report of an NLS-funded project delivered on October 31, 1980, by Exotech Research and Analysis, Inc., in Gaithersburg, Maryland, covered work-flow procedures for conversion of print text to grade 2 braille both manually and by computer; proofreading and correction steps needed to meet current North American Braille Code requirements and NLS specifications; and procedures for printing, collating, and binding. The study evaluated possible new technology and applications and identified for NLS the areas of highest cost; results show that braille production is still labor intensive, particularly in the text verification and correction stages.

To coordinate research efforts toward more cost-effective braille production, NLS signed an agreement with AFB in late 1980 to provide a production center and developmental laboratory to examine current and new technology in relation to computer production of high-grade braille. The research effort is scheduled to run for five years, with NLS providing the high-technology equipment and contracts for short runs of braille material in immediate demand, while AFB provides the space, personnel, and materials to operate and maintain the test center. Initial equipment put in place in 1981 includes the Kurzweil Data Entry Machine, the LED-120 paper embosser, and cassette braille machines. One of the first projects is to test a new line embosser being developed to work at even greater speeds. Other possible projects are tests of manual keyboarding devices and further use of compositor tapes, plus the interface potential with cassette braille machines. Other systems and devices to be tested are likely to emerge in the next few years; in addition to NLS areas of research, individual researchers and firms in this country, Canada, Japan, and many European countries are investigating the use of computers in braille production.

Other Materials

Some NLS research has involved materials and machines for reading formats other than recordings or braille. None of these has as yet proved of sufficient value to be included in the program, although some show promise for the future. Some projects have been ahead of the current state of technology, as was the case with the braille experiment involving compositor tape which originated in the late 1960s but was much more successful a decade later. In other cases, the product or process being tested did not work or was too expensive to produce for a mass audience.

In the period immediately following the extension of service to physically handicapped individuals, several devices—some simple, some fairly complex—were created or tested. The simplest of these were page turners, purchased in Fiscal 1969 but rejected for further consideration because they did not perform as promised. A more extensive project that was pursued from 1970 to 1976 involved "projected books," a system of filming books on an easily loaded 16-mm cartridge for projection onto a screen or the ceiling. The package was to include film (microfiche was also explored), the projector, and the screen—if needed. The system was developed and field tested in 1973 at a Veterans' Administration hospital and at Walter Reed Hospital; a prototype that was redesigned after the field test was delivered in 1975. The project was abandoned the next year with an unfavorable evaluation of the new prototype machine. Similarly, the Ealing/Saltus reader, which used a scroll technique for print material to overcome the problem of turning pages, was examined, field tested, and deemed unsuitable.

Print materials and ways to use them face a particularly severe test, since existing legislation governing the provision of reading equipment allows only for the manufacture and distribution of sound reproducers and braille and recorded materials. To get support for an amendment to the legislation, the equipment must have indisputable value. In addition, in testimony at congressional budget hearings, organizations of blind people have expressed considerable concern that funds spent for print materials would not benefit the people for whom the program was originally established and that funds should be spent for materials usable by both blind and physically handicapped individuals.[217]

In the late 1970s, NLS conducted the Telebook project, which would, if feasible, have provided a different kind of reading service to blind and physically handicapped people alike. Under contract with NLS, the Mitre Corporation of McLean, Virginia, investigated the possibility of providing an on-demand recorded-book service through use of special frequencies on FM radio or cable television channels. Patrons could dial the service, call up a particular book where they had stopped reading, and stop reading when they wished. Participants in the user survey, conducted in Columbus, Ohio, were enthusiastic, but costs of providing the recorded books, equipment, telephone lines, operator services, and radio and television channels proved prohibitive.

Automation

NLS processes millions of individual transactions each year involving patrons, titles, playback machines, braille volumes, cassettes, and discs. Its efforts to computerize these operations began in the early 1970s. In 1982, NLS was investigating proposals for a complete data processing and telecommunications system (NLSNET) to link NLS, regional libraries, multistate centers, and machine-lending agencies. Automation of any system involves certain benefits and certain limitations, but NLS finds that its computer experience overall has represented significant progress in efficiency, productivity, and quality of service.

Production Control

The first major automation project was a production-control system, developed in the early 1970s, which handled essentially clerical tasks: writing orders to booksellers for the required number of print books; requesting clearance permission from copyright holders; ordering masters, book cards, copies, and catalogs; compiling bibliographic data; and handling orders from regional libraries for books produced by the NLS program. By 1978, a supplementary automated production system to track all the steps in the production process of each book had been introduced. This system recorded the date on which each step was completed. With these dates in its memory, the computer could tell where books were in the production process, how many books were in each stage of production, which booksellers or book producers provided the best services, how NLS workers were performing in terms of timeliness and efficiency, and where improvements in the production system were indicated.

These two systems, which are still in use, operate side by side, however, and are not coordinated with each other. NLS is developing an enhanced system that combines all functions of the existing designs with new activities to increase its production control ability. The new single system, which will be part of an automated management system permitting easy modification, may include such activities as estimating more accurately at the time a title enters production when it is likely to be completed and shipped. Librarians need this information to schedule the flow of books; contractors performing the various tasks in the production process can benefit as well. With improved estimates NLS can regulate the number of books created each year and match production expenses with available funds.

Computer-Produced Catalogs and Bibliographies

In Fiscal 1975, NLS began a retrospective cataloging project to ensure that all available bibliographic records were ready for conversion to machine-readable form and eventual computerization. The first product of this effort, *Reading Material for the Blind and Physically Handicapped*, a computer output microfiche (COM) catalog, appeared in 1977. Three cumulative, quarterly editions of the catalog that year listed more than 15,000 annotated titles of loan materials in braille and recorded form. After one full year of publication, the catalog in Fiscal 1978 included 22,000 entries and was being tested for national on-line computer distribution.

In its third year of publication, *Reading Material* listed 27,000 titles. Moving toward the goal of developing the microfiche catalog into a union catalog of materials for blind and physically handicapped people, NLS began a cooperative cataloging project with network libraries. The automatic assembly of the catalog makes this cooperation feasible. NLS has adapted the MARC (machine-readable cataloging) system of the Library of Congress. Computer programs quarterly manipulate these records onto magnetic tape from which a contractor produces the microfiches that are then sent to libraries. The catalogs are cumulative, each succeeding the previous issue, and have an unusually large number of "entry points." Network libraries that produce books and are willing to lend them outside their own areas submit cataloging forms to NLS for input to the MARC records. The April 1979 edition of *Reading Material* contained the first cooperatively cataloged entries: about thirty books from six regional libraries.

Other agencies, such as Recording for the Blind, Inc., and the National Library of Australia, joined the cooperative cataloging project soon after network libraries began to participate. Because these groups create their own machine-readable catalog records, an NLS programming contractor converts their formats into a form compatible with the Library of Congress computer. By January 1983, *Reading Material* listed more than 57,000 entries.

Since 1980 the COM catalog database has been accessible for online searching in a national information retrieval network, Bibliographic Retrieval Services, Inc. (BRS). BRS processes a tape copy of the NLS computer file through an indexing program that indexes each significant word or number of words in all the records and makes the records retrievable by these groups of characters, either singly or in any desired combination. This procedure permits access to these records by any clue available in the catalog, including the annotation.

Such an information-retrieval method not only locates all books meeting desired criteria but also simplifies generating special bibliographies for individual and general use. NLS adopted these unusually extensive techniques to ensure maximum use of the necessarily limited collection of books available to the eligible audience. This system is searched regularly by more than a dozen network libraries, by Recording for the Blind, and by the National Library of Australia via satellite.

Circulation

Automated circulation in libraries for blind and physically handicapped readers is far more complex than the same activity in libraries for sighted persons. In the latter case, patrons do most of the work by selecting, checking out, and returning books. The computer keeps track of who has each book and when it was checked out. Once a book returns, no further record is needed. In contrast, a library for blind or physically handicapped persons must be able to store the identifiers of the books a patron wants to read. According to the 1981 Market Facts user study, about one-third of the network's patrons prefer always to select their own books. About one-half like a library staff member designated a reader advisor to make their selections on the basis of their expressed interests at least some of the time. Most patrons want to receive a regular flow of books, either on a calendar basis or as replacement for returned books.

When patrons need service, the computer matches patrons' personal request lists against the available books. The checkout procedure involves inserting 3" x 5" mailing cards into the books' pockets. These mailing cards are printed for a half-day's or a full day's circulation needs, with the cards sorted in the order in which the returned books are temporarily stored in the mailroom. Thus, many books do not have to be reshelved and recirculation of popular books is expedited. Additional cards are printed to meet unfilled needs in the order in which the books are stored in the stacks. A clerk need only take a pile of these cards and make a continuous tour of the stacks, placing cards into pockets and loading books into mail tubs for dispatch.

When patrons rely on reader advisors to select books according to the patrons' interests, the process is more complex but still well suited to the computer's capabilities. All book records in the computer must have codes indicating attributes that can be matched with patrons' interests. On demand, the computer can display to the reader advisor titles meeting each patron's requirement, even, if desired, excluding from selection books that have violence, strong language, or explicit descriptions of sex. (Tag-lines on such content included in book descriptions since the early 1970s permit this exclusion.) The computer must keep track of all books the patron has read so that a book will not be selected repeatedly.

Over the past two decades, about twenty of the larger network libraries have installed automated circulation systems. In most cases these libraries have built, with the help of their parent agencies' computer or their state's data processing department, systems to match their needs.

The role of NLS in this area has been to assist libraries seeking to automate their circulation. Experience with many of these systems allows NLS to provide consulting services to libraries and their administrative agencies, usually through referrals to other libraries whose experience most closely matches the requesting library's interests. *Automated Circulation Systems in Libraries Serving the Blind and Physically Handicapped: A Reference Guide for Planning* was prepared in 1981 under contract to NLS by Cuadra Associates, Inc. The book summarizes the details of nineteen NLS network automated circulation systems and helps libraries and their computer contractors design appropriate systems.

Interlibrary loans constitute another major aspect of circulation, since these loans make the resources of all libraries available to each library's patrons. Interlibrary requests are now handled mainly through handwritten forms, but rapid exchange of such information is one of the expectations for NLSNET.

Mailing List

Until Fiscal 1980, separate mailing lists were kept for major NLS publications such as catalogs and newsletters, involving manual systems as well as one large computerized operation that had begun in 1968 using an outside contractor. This approach proved to be inefficient and wasteful and was replaced in 1980 by a highly complex computerized system known as the Comprehensive Mailing List System (CMLS). Through CMLS, subscriber data is maintained for the distribution of publications to individuals and organizations. Three years after the CMLS operation began, about 300,000 names and addresses were in the system and some 500,000 transactions a year were being performed—adding new patrons, changing addresses, removing people from the list, and adding or deleting publication subscriptions so that patrons receive or stop receiving publications as desired. About five million mailing labels are produced annually.

Each network library is responsible for keeping the name and address of each of its active patrons and the subscriptions they are to receive up-to-date on CMLS. In 1982, NLS began testing the merger of mailing lists for program magazines with the listing of patrons on CMLS. A major benefit to libraries when the magazines are merged is that a single address change for a patron automatically applies to all of the individual's magazine subscriptions, in contrast to the present system which requires a patron's address to be changed on each magazine mailing list.

A significant side benefit from CMLS is the guidance it provides for the whole NLS program. Along with names and addresses for mailing purposes, the computer compiles other data about program use, such as interest in braille or young-reader materials, type of machine or machines the patron has, and publications being received. The computer provides various summaries of these data so that NLS and its libraries have a clear picture of the types of people who are using services and can direct their programs accordingly.

Machine Accountability

The CMLS computer system provides a current descriptive picture of NLS patrons; another computer system provides a historical picture of NLS machines. Since the inception of the talking-book program a network of machine-lending agencies has distributed about 700,000 playback devices to patrons and institutions where patrons are served. These machines are U.S. government property and are worth, cumulatively, several tens of millions of dollars.

In Fiscal 1978, in keeping with the government's requirements, NLS introduced a sophisticated computer system to track these machines from the factory to the time they are declared obsolete many years later. An NLS contractor keeps a computer record of the lending agency responsible for each machine; auditors visit these agencies with computer lists permitting them to compare the agency's records with those in the computer. This system allows the government to pinpoint the location of each machine at all times.

Surplus Books

In 1980, NLS automated its cumbersome manual system for dealing with surplus books, usually extra copies of former bestsellers. Under the XESS System, libraries send lists of their "excess" books to an NLS computer contractor who semiannually compiles a list of all titles for which excess copies are available. These lists go to all network libraries, which order books they need for their collections and return the lists to the contractor. The computer then matches requests with offerings and produces sets of mailing labels, in shelf order and by offering library, so that each library can send its selected excess books to the requesting libraries. The computer also generates lists of each offering library's unwanted books, so that formal disposal procedures can be followed.

Through this system, more than 100,000 books are "reclaimed" each year, and shelf space is released for new books. This redistribution of books also reduces interlibrary loans by allowing libraries to acquire books they would otherwise need to borrow.

Copyright Clearance

Whenever a print book is to be converted to braille or recorded form, clearance for reproduction must be secured from the copyright owner unless the title is in the public domain. NLS requests such clearance for the books it creates and generally for network libraries considering using volunteers for local book production; occasionally network libraries clear such titles themselves.

In 1979, NLS automated its card file on copyright clearance records. Information about copyright clearance requests and their results now are stored in a computer; an updated list is produced semiannually on microfiche for distribution to all libraries. This list does not automatically constitute approval for other libraries to reproduce books for which clearance has been obtained, because of possible limitations imposed by the copyright holder. However, it does provide clues as to where certain brailled or recorded books may be found. Libraries can then check with the organization that requested copyright clearance about whether the book has become available, thereby increasing their own resources for serving patrons.

NLSNET

The many existing computerized activities of network libraries, machine-lending agencies, multistate centers, and contractors represent the exchange of millions of data items annually. Since 1979, NLS and the four multistate centers have been linked through a telecommunication system for the purpose of making and responding to book requests, but most exchanges of information are accomplished by paper or by voice. For example, a playback machine manufacturer shipping a batch of machines to a lending agency sends a list of the machines' serial numbers, with a copy going to the NLS machine inventory contractor. The lending agency affirms receipt of the machines by sending a marked copy of the shipping document to the NLS contractor. The contractor must input manually to its computer each set of data; the lending agency also must store the same information in manual files or in its computer.

If the manufacturer sent these data in machine-readable form on computer tape or diskette and the lending agency kept its data in a microcomputer, manual input would be needed only once—by the manufacturer. The data would need only to be adjusted before being sent on, again in machine-readable form, to the other organizations involved. The same principle can apply to shipping books for library inventory, interlibrary loan, information about the types of repairs performed on playback machines, transmission of statistical data, and exchange of mailing list information.

As more information is stored in computers right from the start of an activity, it becomes possible for data to be transmitted between computers in forms that computers can understand—forms that do not need to be written out and reinput. Telephone connections between computers can effect immediate exchange of this information. Data can be transmitted over telephone lines to a central "national" computer, from which they can be transmitted and recaptured on demand by other local computers. When speed is not essential, the mails can be used to exchange magnetic tape or diskettes. Such a system can facilitate the exchange of data and improve the accuracy of the data.

NLS is now working with a contractor to design such an "electronic networking" system—NLSNET. The contractor is studying not only the types of data exchange appropriate to the many NLS-associated agencies, but also the types of computer hardware best suited to the system's performance and the ways in which NLS and network libraries can cooperate in establishing such a project.

NLS envisions computer nodes with intercommunication capabilities at NLS and its database and production control contractors, the multistate centers, the regional libraries, and machine-lending agencies that are separate from regionals. Subregional libraries may eventually be included as well. Master files may be stored at NLS contractors' facilities or on Library of Congress computers. No single large computer is planned. The principal computerized function at regional libraries would be circulation; at machine-lending agencies, machine inventory and machine repair information; and at multistate centers, circulation, machine inventory, and supplies inventory control. Master files that would supply data to these functions include the following: in-process, master bibliographic, machine inventory, machine-repair data, Comprehensive Mailing List System, excess-book distribution, supplies inventory, and statistics. Other related functions are electronic mail; copyright clearance requests and permissions; book, machine, and supply requests from libraries and machine-lending agencies to multistate centers and NLS; and interlibrary loan.

The Collection

In Fiscal 1966, when service was first extended to physically handicapped people, NLS was mass-producing about 400 talking books and 275 braille titles annually. In addition, that year volunteers provided more than 500 masters for the magnetic-tape collection and 400 hand-copied braille titles. By Fiscal 1980, titles were being added from all sources at the rate of more than 2,300 a year, including duplicate formats: 1,275 on cassettes, 350 on rigid discs, 100 on flexible discs, 300 mass-produced braille, and 300 volunteer-produced braille.

Selection

In Fiscal 1970 and 1971, 90 percent of all bestsellers were issued in one format or another, including magnetic tape, and 90 percent of the books later chosen by ALA for "Notable Books of 1970" and "Best Books for Young Adults 1970" had been added to the collection. Many authors won Pulitzer Prizes for books already selected for the program, such as *A Confederacy of Dunces,* by John Kennedy Toole. Automation improved the ability of NLS to plan collection development by providing access to material and figures that could be manipulated in meaningful ways to analyze the collection. For example, it became possible to print out in minutes the titles in various media in the collection by Dewey classification. The policy established in 1953 of reissuing older titles continues; for example, in Fiscal 1980, some 2,600 titles, some of the finest work ever done for the talking-book program, were selected for modification to current technical specifications and reissue in cassette format. Priorities suggested by the ad hoc advisory group established in Fiscal 1976 and composed of librarians representing their regions, representatives of organized consumer groups, and individual readers play a significant role in collection development.

The magazine program enjoyed similar expansion, from fifteen recorded and ten braille titles, including NLS-produced music periodicals, in 1967 to forty-four recorded and thirty-eight braille titles in Fiscal 1982. Program magazines included *Harper's, Ellery Queen's Mystery Magazine,* the *Farm Journal, U.S. News and World Report, Money,* and *Ranger Rick's Nature Magazine* on flexible disc; *Psychology Today, Popular Mechanics, Seventeen, Boys' Life, Blind Data Processor,* and the *Ladies' Home Journal* in braille.

Emphasis in the foreign-language collection fell mainly on Spanish because it was the primary language of a large number of potential patrons in Puerto Rico and the continental United States. Indeed, the United States is estimated to be the fifth largest Spanish-speaking country in the world.[218] In Fiscal 1967, NLS filled requests from what was available commercially; it asked network librarians to estimate the number of potential Spanish-language readers in their areas and to recommend titles for them; it bought braille books from Brazil and Argentina; and it started an exchange program with Spain for taped recordings. The following year it produced a Spanish title each month and added *Selecciones del "Reader's Digest"* to the magazine program. *Buenhoger,* the Spanish-language edition of *Good Housekeeping,* was added in 1970. For these recorded materials, NLS specified New World Spanish for the narration. After acquiring a dozen classics or titles published in Spanish-speaking countries, NLS began stressing more practical and popular titles; it found that, as residents of this country, Hispanic patrons were more interested in

American literature and culture. Since 1973, NLS has provided Spanish-language application forms. An ad hoc advisory group on Spanish, composed of network librarians, recommended a list of fifty titles in Fiscal 1978.

NLS moved more slowly into other languages. In Fiscal 1968 it ordered a few stories in each of the major European languages—French, Italian, German. And in Fiscal 1971 it added to the collection the first books in Italian and Slovenian, produced by volunteers. The following year, NLS estimated that there were 13,000 eligible German-speaking readers, 12,000 Italian-speaking, and 3,300 French-speaking.[219] In 1978 a foreign-language librarian was appointed to the staff to handle the selection of titles for mass production; to develop the special foreign-language collection, a limited collection of recorded and brailled materials acquired from various countries by purchase, gift, or exchange; to provide a referral service for foreign-language materials available elsewhere; and to coordinate the collection of such materials in the network. In 1980, the braille catalog from the Polish Union was translated into English and braille manuals for grade 2 French and Spanish were transcribed into print.

Despite problems with copyright clearance and delays in receipt of materials from overseas, NLS has continued to develop its foreign-language collection to meet increased reader demand, with the result that in Fiscal 1982 it could offer 331 Spanish titles, as well as 17 French, 5 German, 3 Italian, and 2 Polish titles. Seventy-seven more titles are in production. The annual goal is to mass-produce 50 titles in the major foreign languages (Spanish, French, German, Italian, Polish, and Portuguese) and to add 100 titles to the special collection, which consists of 79 recorded titles.

To make every selection count and to keep readers and the network aware of collection goals, NLS is developing a new approach to collection building. As a first step, NLS is performing an analysis of its collection and drafting statements of precisely what areas it will cover and in what depth. Once NLS's collection-building goals have been clearly delineated in this way, the second phase calls for asking network libraries to undertake the same process. For example, a library with a large number of German-speaking patrons may wish to focus on acquiring German-language texts. Even large volunteer organizations are to be asked to define their "areas of specialization" to complement the national program. The end result is to be a series of unique collections constituting a broader body of literature more responsive to the needs of blind and physically handicapped readers. ALA has established guidelines for such arrangements, which are similar to those of university library consortiums.

Music

The extension of services to physically handicapped individuals accelerated the addition of recorded and large-print materials to supplement the braille music collection. Most of the new patrons were visually handicapped, although some physically handicapped readers unable to hold standard print materials were added. The first instructional music disc was circulated in Fiscal 1967. While most recorded materials were (and are) purchased from standard commercial concerns who produced them for sighted people, NLS has prepared a few such materials for its patrons, hiring consultants to produce accordion or recorder methods, for example. In 1982, NLS purchased National Public Radio tapes of broadcasts on music subjects. Recorded instructional materials include interviews with musicians, lectures, analyses of music, and instruction in music theory.

Production of large-print music scores, which are generally unavailable commercially, has gone through several phases. In the early 1970s, NLS added a few photographically enlarged scores to its collection, but Sigma Alpha Iota (SAI), an international music fraternity for women, handdrew the bulk of its music scores. In Fiscal 1976, NLS moved from handdrawn masters to those prepared by a combination of photographic enlargements and reformatting, still enjoying the assistance of SAI, Phi Beta Honorary Sorority, and individual volunteers. To provide guidance to volunteers, NLS published *Large-Print Music: An Instructional Manual* in 1979. It is currently investigating computer production of large-print music.

Initially, the emphasis in braille music production was on press braille. For example, in Fiscal 1967, NLS helped prepare and mass-produced a braille instruction book for guitar and a music theory book. In Fiscal 1968, it had press-brailled more than 140 selections required for the National Federation of Music Clubs Junior Festival, allowing more blind musicians to compete. The resources of the press-braille houses for current production were so limited, however, that NLS began developing volunteer skills to meet the demand. It published Mary Turner de Garmo's *Introduction to Braille Music Transcription* in 1970. NLS also initiated a braille music proofreading program. In Fiscal 1973, it surveyed music braillists to determine, on the basis of their preferences and musical backgrounds, how each could best serve the program; roughly three-fourths of all acquisitions that year were volunteer-produced. By 1981 all NLS-produced braille music was handcopied by volunteers. As new catalogs of braille music scores are located, such as those obtained from Germany, Denmark, Finland, Norway, and Sweden in recent years, NLS also adds press-braille music from these sources to its collection. Its research project on computerized braille music production, begun in Fiscal 1971 with initial funding by the Kulas Foundation, proved impractical for any but the simplest music and the project was discontinued.

NLS offers a number of music magazines. It compiles the irregularly published *Popular Music Lead Sheet*, first issued in Fiscal 1978, which typically contains melodies, lyrics, and chords for five popular songs. It provides interested patrons with free personal subscriptions to *Overtones*, produced by the New York Lighthouse for the Blind, and to a British braille publication, *Braille Musical Magazine*. NLS selects articles from a number of print periodicals and publishes them in two bimonthly magazines, according to content: *Contemporary Sound Track*, which covers pop, jazz, rock, and country music, was first issued in 1978 and is available only on cassette; the *Musical Mainstream* is primarily concerned with classical music, but it also announces NLS music acquisitions and includes special features about braille music notation; it is available in large print, on cassette, and in braille. NLS records *High Fidelity/Music America* on flexible disc. In 1976, it began brailling and in Fiscal 1979 recording on cassette the *Music Article Guide*, an annotated subject index to significant signed articles in about 150 American music periodicals.

The most significant music reference service NLS provides consists of brailling and recording on cassette requested articles listed in the *Music Article Guide*. Masters of all articles reproduced are retained for use by other patrons. To assist patrons with reading older braille scores, NLS in Fiscal 1977 commissioned the *Dictionary of Braille Music Signs*, published in large print and in braille, containing explanations of the structural elements of braille music and definitions of braille signs used in press-braille music since 1880. In addition, NLS offers more traditional reference services, such as advising patrons where special-format music can be purchased or referring them to books about adapting musical instruments for their use. In Fiscal 1973, it issued its first music circular to network librarians, listing recorded courses in the collection.

In Fiscal 1977, NLS began issuing a series of catalogs, Music and Musicians. The catalogs are issued in large print and in the format of the materials cataloged; thus, one of the first volumes, *Instrumental Disc Recordings Catalog, 1977,* was available in large print and on flexible disc. Seven volumes were published in less than two years. By Fiscal 1981, eight of the ten catalogs in the series had been produced (and some updated), covering music scores and recorded instructional materials.

To foster bibliographic control and international library loan, in 1982 NLS began a survey of the braille music holdings of foreign libraries and organizations. Conducted in cooperation with the International Federation of Library Associations and the International Association of Music Libraries, the survey has as its basic purpose the publication of a directory that documents the existence of braille music collections, briefly describes their size and contents, gives information about loan policies, and provides the current address of each library and the name of a contact person.

In addition, to provide more effective service, in 1983 NLS is undertaking a survey of its music patrons to determine their education, experience, and interests in music; use of the music collection and reference services; awareness of specific services; and demographic characteristics.

Access to Collections

New Titles

Providing ways for blind and physically handicapped people to access the entire collection has been an ongoing project of NLS and has been approached in several ways. The publications most immediately available to patrons are *Braille Book Review* and *Talking Book Topics,* bimonthly magazines that list books produced since the previous issue. *Braille Book Review* lists braille books and is available to patrons in large-print and braille editions; *Talking Book Topics* lists recorded books and is available in large-print and flexible-disc editions. Both magazines contain an author/title index, articles of interest to readers, and a list of magazines available in the appropriate format. Almost all patrons subscribe to one or more editions of these free magazines.

When the flexible-disc version of *Talking Book Topics* was first provided on an experimental basis in 1968, it was bound into the print edition and circulated to all subscribers and was also circulated with the combined braille edition of *Talking Book Topics* and *Braille Book Review.* This practice continued until 1974, when the petrochemical crisis led to shortages and rising costs. To conserve available resources, NLS separated the publications into different editions and surveyed patrons to determine whether they wanted only the print or the recorded edition of *Talking Book Topics;* patrons could still have both if desired. Braille readers were surveyed to determine the relative usefulness of a braille version of *Braille Book Review* that contained only braille titles but included the flexible-disc edition of recorded titles and print/braille order forms for braille titles and recorded titles. At the same time, NLS began assuming editorial control over these publications from AFB, who had produced them since the 1930s.

Both periodicals were improved in usefulness and appearance. Since 1978, the disc edition of *Talking Book Topics* has contained an annual insert of updated Social Security information provided in cooperation with the Social Security Administration. In 1979 optical character recognition (OCR) characters were incorporated into the order form for easier processing by automated libraries. Both magazines have won publishing awards: *Braille Book Review* (print and braille editions) in 1976 from the American Institute of Graphic Arts and a Blue Pencil Award from the National Association of Government Communicators in the same year; *Talking Book Topics* in 1979 from the Washington, D.C., Chapter of the Society for Technical Communicators.

Catalogs and Bibliographies

In 1966 and 1967, NLS began publishing biennial catalogs of *Press Braille Adult, Talking Books Adult,* and *For Younger Readers*, beginning with books produced in 1964 and 1965. The juvenile catalog listed both braille and recorded materials. The two adult catalogs were the first mailed directly to patrons, 110,000 talking-book and 10,000 braille readers, all of whom thus had personal copies. For the first time, too, a catalog of talking books was itself produced in recorded format. Order forms were included in the next set of biennial catalogs. The first catalog of cassette books, published in 1968, listed books originally produced as talking books in 1964 and 1965. After cassettes became a standard format, NLS produced *Cassette Books* in 1971, which listed 700 additional titles; by 1980 the sheer volume of cassette books required annual catalogs for this format. In Fiscal 1973, NLS produced *Libros Parlantes*, a catalog of 47 Spanish-language titles with an enclosed disc narrated in Spanish. The 1980 edition of this catalog, produced in large print and on disc, was a cumulative listing of all 120 Spanish-language titles then available from the program.

To inform patrons about older titles in the collections, NLS compiles and publishes subject bibliographies. *Reading for Profit* was revised and reissued as *Talking Books to Profit By* in Fiscal 1970. In 1972 a series of minibibliographies called "Topics in Review" began publication as an insert in *Talking Book Topics* and *Braille Book Review;* they contained titles in disc, cassette, and braille formats. Some topics covered were science fiction, children's literature, and the black experience. These minibibliographies were also recorded on flexible discs bound into the magazines. In Fiscal 1975, NLS began publishing major subject bibliographies regularly, ranging from children's books about animals and adult books about sports and home management, science and science fiction, to biographies in the arts and in government and politics, fiction for readers aged twelve to twenty, bestsellers, and mysteries.

For cost savings, in Fiscal 1980, NLS began sending patrons a reader survey/order form to allow them to indicate which catalogs and bibliographies they wanted and in what format. In Fiscal 1982, nearly 350,000 such order forms were sent to patrons to obtain advance subscriptions to publications in production. This system of advance ordering, developed over a four-year period, saved approximately $700,000 in Fiscal 1982 alone. Also in Fiscal 1982, NLS launched an extensive research project to determine how publications designed to communicate with patrons could be improved as to content, organization, format, packaging and labeling, and distribution. NLS publications had never been evaluated in a structured manner and information was not available to use in considering the relevance and validity of consumer comments. At the same time, publications costs were rising, especially for items produced in braille and recorded formats. NLS expects information solicited from patrons through the project's series of surveys to be helpful in evaluating cost-effective solutions in relation to consumer interests and needs.

Network Support Services

To facilitate reader access to its books, the national program has progressively provided more support services to network libraries. Its enabling legislation, the Pratt-Smoot Act, was based on the need for centralized mass production of embossed books. Since 1931, judgments on what other functions could or should be centralized have varied, depending on technological advances, changing concepts of networking, the growth in readership and the network, and other factors.

Perhaps the most important centralized activity to provide access to program books is the database for the COM catalog. As this catalog incorporates more material available on loan from more sources, it will approach the old ideal of a true union catalog of special-format materials for handicapped people. The fiche catalog facilitates simple searches and interlibrary loan, while BRS makes it possible to conduct more complex searches at patron request. It can, for example, generate a list of Newbery Award books in braille, or books on physics produced since 1978, or one-cassette books of fiction narrated by men. NLS encourages librarians to gain access to BRS so they can use this one-step bibliography. The system is useful in other ways as well; for example, print-outs of titles in process prevent duplication of effort by network library volunteers.

The growth in readership between Fiscal 1966 and Fiscal 1981 necessitated streamlining operations at NLS and in the field. Communication between the two was improved in a multitude of ways, including the installation of a teletypewriter in Fiscal 1968 and an IN WATS line, available to volunteers and patrons, as well as librarians, in Fiscal 1973. In Fiscal 1975 NLS began providing orientation sessions for network staff, giving these people an opportunity to meet and better understand the functions of various work groups. Biennial national conferences on library services for blind and physically handicapped individuals continued, and, since the mid-1970s, four regional conferences have been held in the off-years.

From providing network libraries with book cards and catalog cards to the direct mailing of catalogs, bibliographies, and current issues of program magazines to readers, NLS has increasingly assumed responsibility for network support services. It has provided local workshops on various phases of the services, such as operating cassette duplicating equipment, producing recording masters, using volunteers, educating the public, using BRS, and making interlibrary loans. Working with major acoustical engineering manufacturing corporations, NLS has attempted to improve the design and function of prefabricated recording studios sold network libraries and related volunteer organizations, begun new testing procedures to ensure studio acoustic performance in recently installed facilities, and assisted in the design and installation of studios. In Fiscal 1975, NLS published a *Manual for Regional Libraries* and began issuing Network Bulletins, coordinated with the manual, to give network libraries and machine-lending agencies relevant day-to-day procedures. In the early 1980s, it published *Reaching People*, a manual for network libraries on public education; a *Manual Circulation Handbook,* with a video cassette synopsis; a *Network Library Manual,* which supersedes the 1975 manual; and a procedures manual for machine-lending agencies. NLS advises network librarians in developing sampling procedures and data collection methods for their surveys. In 1982, NLS issued to network librarians guidelines on establishing consumer advisory committees.

Reference services issues circulars on reference materials network libraries need to have and on subjects network libraries receive many queries about, such as national organizations concerned with visually and physically handicapped individuals. NLS supplies fact sheets, bibliographies, and address lists for regionals to use internally or to distribute. In Fiscal 1969, NLS assembled its first package library on relevant subjects, such as eye diseases of the elderly. Package libraries contain leaflets, brochures, reprints of periodical articles, brief bibliographies, and government documents. In Fiscal 1971, it issued its first information packet for potential readers, consisting of application forms for both individuals and institutions, basic information about the program, and an up-to date list of regional libraries by state. It first published a *Directory of Library Resources for the Blind and Physically Handicapped,* listing the address, phone numbers, and name of the librarian or director of regionals and machine-lending agencies, in Fiscal 1969, adding data on services offered, book collections, and other resources in Fiscal 1971. The directory is produced annually.

In addition, multistate centers were created as backup for libraries. The first two were established in the Utah and Florida regional libraries in 1974 to serve the western and southern regions, consisting of thirteen states each. After the concept was proven in the field, two more multistate centers were established in 1976, one in the northern region, affiliated with Volunteer Services for the Blind in Philadelphia, and one in the midlands region, now affiliated with Clovernook Home and School for the Blind in Cincinnati. Dealing with network libraries and machine-lending agencies, multistate centers house and lend all materials available in the national program; act as focal points for volunteer production of materials in their areas; maintain and circulate "special" collections of little-used materials, including back issues of magazines, limited-edition cassettes and braille books in the national program, and books produced by volunteers in their areas; store and supply playback machines and accessories and, to a limited extent, replace parts or provide backup repair service for these items; store mass-produced promotional materials, such as catalogs, bibliographies, and brochures; and duplicate cassettes and handcopied braille books. Since 1977 directors of multistate centers have met annually to deal with operational matters.

In Fiscal 1975, NLS established a formal network consultant program and accelerated contact with field staff. Four individuals holding key positions in the program were given the added responsibility of serving as primary liaison with the four regions, making regular visits to network libraries in their assigned areas and giving individualized support and advice. The size and composition of the consultant staff varied for the next few years as managerial personnel with needed expertise were given part-time consultant duties. Two factors led NLS to effect the move to full-time consultants in 1979. The demand for service became so great that the workload was too heavy for managers with other responsibilities. And, in view of their function of facilitating communication between regional librarians on various issues, it became apparent that the more contacts consultants had in the field, the more effective service they could provide.

Volunteers

Even before the NLS program was established, volunteers were making significant contributions to provision of reading materials for blind individuals. Volunteer activity has been an essential program element over the years through direct services to NLS or to network libraries. A study in 1980 showed that volunteers were providing services for almost three-fourths of network libraries.[220] Nationwide, nearly 11,000 volunteers were contributing an estimated 750,000 hours annually in six general areas: production of materials, repair of equipment, circulation and maintenance, reader services, outreach, and administration. The study valued the net volunteer contribution (gross worth minus administrative costs) at a minimum of $3 million.

Other major findings of the study were as follows:

About 4,500 volunteers were involved in the production of materials, including tape narration, monitoring, reviewing, and duplication; transcribing, proofreading, Thermoforming, binding, labeling, and packaging braille; and transcribing large type.

3,000 Telephone Pioneers were working with network agencies to provide most repair services for cassette and talking-book machines. In some areas, Pioneers do repair work in patrons' homes, making the service much more personal.

More than 450 volunteers were involved in circulation and maintenance, including inspection of tapes and discs as well as general clerical tasks connected with distribution. Inspection has received increased emphasis in recent years to assure that patrons receive complete books in good condition.

The most personal services provided patrons by volunteers were reading to individuals, transporting patrons to and from the library, delivering machines and books, and providing reading guidance. Thousands of volunteers were giving nearly 26,000 hours in the reader-services area annually.

Just under 200 volunteers were working in the areas of outreach and administration, contributing an annual total of about 11,500 hours. Their activities included speaking to community groups, recruiting volunteers, helping to schedule volunteer labor, and serving as advisors to network libraries.

Because of this extensive activity, the study indicated that NLS needed to strengthen its overall strategy for use of volunteers, give more guidance to network libraries for establishing and managing volunteer programs, upgrade the quality of volunteer-produced materials, provide more training materials, conduct workshops, and emphasize implementation of ALA standards for the use of volunteers. NLS has developed plans to respond to these recommendations, and preparation of a volunteer manual for use in network libraries began shortly after the study results became available.

The primary role of NLS in relation to volunteers has been in the area of technical training. Volunteers who produce handcopied braille masters have been trained in braille transcription through Library of Congress courses taken by correspondence or with local groups. Participants are required to prepare a series of transcriptions of increasing difficulty until they obtain the level of proficiency necessary for certification. Local teachers evaluate the training transcriptions; final transcriptions are proofread and evaluated by blind braille training specialists on the NLS staff. Usually between 450 and 500 people a year achieve certification in literary braille; more than 15,000 individuals have been certified over the years.

NLS also offers courses leading to certification in proofreading and in music braille. About ten people a year per course are certified in these more specialized subjects. The proofreading course is as old as literary braille certification, while the music course was begun in the late 1960s.

The most recent course to be developed covers the Nemeth code for mathematics and science transcription, with the first mathematics braille certificates awarded in 1980. In keeping with efforts to decentralize all braille instruction, NLS instructs certified braille mathematics transcribers in establishing local braille math instruction. A videotape production, "The Challenge of Braille Transcribing," issued in 1982, is used generally to encourage sponsorship of local instruction in braille.

NLS also offers network libraries technical assistance in other areas involving volunteers such as machine maintenance and repair, establishing and operating recording studios, evaluating audition tapes, and book inspection. Since 1979 NLS has supplemented its personal service with video programs on specific aspects of these areas.

To keep volunteers, volunteer groups, and network libraries informed of technical information such as changes in the braille code or suggested job descriptions for studio personnel, NLS resumed publication of a separate volunteer-oriented newsletter in 1977, after a brief period when such information was included in *News*. Renamed *Update*, the volunteer newsletter also covers volunteer activities in network libraries and other groups producing special-format reading materials for blind and physically handicapped people. *Volunteers Who Produce Books* serves as a referral source for librarians and patrons with special reading needs and is indexed according to types of material provided, for example, format and subject, such as foreign languages or mathematics braille. This directory is updated at two- or three-year intervals as needed and is produced in both large print and braille.

NLS uses skilled volunteers and volunteer groups to produce some brailled and recorded materials for the collections. About half of the braille titles selected for production each year are handcopied books that are mastered, duplicated, and bound through the efforts of individual volunteers, volunteer groups, or a combination of individual and group effort. Volunteer groups provided all the master tapes for recorded books when the cassette format was introduced. Most recorded books are now professionally narrated, but some are still assigned to volunteer groups who have been active in the program for many years.

In 1980, NLS established contract agreements with volunteer groups recording books for its program, in accordance with plans to provide uniformly high-quality material for patrons, whether recorded professionally or by volunteers. Five groups met the NLS criteria and were selected to produce master tapes according to NLS specifications. In 1982, NLS authorized the Multistate Center for the Midlands to pilot a quality-control project to review network-produced materials for similar compliance to standards.

Concurrently, NLS began to improve coordination of activities for handcopied braille materials. These books had been produced for many years through a series of steps. In most cases, titles were assigned to sighted individuals for mastering, to blind individuals for proofreading, and to one or more volunteer groups for duplicating and binding. In 1981, NLS was using the services of approximately 500 volunteer braillists, around 100 proofreaders (who are paid by the page for their services), 5 Thermoforming groups, and 9 binding groups. Some of the binderies did Thermoforming as well as binding and a few groups could accomplish all steps. An evaluation of these volunteer braille-production resources indicated that although some titles were being produced quickly, the average handcopied braille book took two years to produce and many books took considerably longer, primarily because of the need for more coordination among steps and closer monitoring of performance against time schedules.

Between December 1981 and February 1982, NLS submitted its criteria for coordinating this production to twenty-six volunteer groups producing braille materials in their own localities or for NLS. Only one interested group, the Essex Chapter of the American Red Cross in

East Orange, New Jersey, was qualified to coordinate all volunteer-produced titles on a contractual basis similar to that of the recording groups, with titles to be produced under an established delivery schedule and performance to be monitored according to quality specifications equivalent to those for press-braille materials. Individuals and groups previously working directly with NLS were advised to contact the Essex group for assignments. NLS expects that other groups will qualify as volunteer coordinators in the future.

For handcopied braille, NLS selects titles that are needed for the collection but are of more limited interest than those selected for press braille, which averaged seventy copies per title in 1982. Since 1976, four copies of handcopied titles have been duplicated by Thermoforming and a bound copy has been sent to each multistate center for circulation upon request from braille-lending libraries. NLS could provide these multiple copies largely because of three volunteer groups established within prisons, one in Tennessee and two in Maryland.

The production capacity of all three groups was used to provide the multiple copies needed for titles already mastered, leaving other volunteer groups free to devote their efforts to current production. Within six months of the time it was founded at the Maryland Penitentiary in 1979, the Baltimore Braille Association (BBA), the newest of the three groups, was Thermoforming and binding approximately 200 volumes of braille a week and also repairing cassette machines. With current production now being handled by the Essex group, BBA is used primarily to provide additional copies of books when the basic production quantity of four copies is not sufficient to meet patron demand. Requests for additional copies can be filled within about one week of the request being received by NLS and the master being provided to BBA for duplication and binding.

Volunteers provide NLS with materials other than books for the collections. Sigma Alpha Iota, the international music fraternity, continues to work directly with NLS to produce masters for large-print music scores. Since 1977, masters have been prepared by cutting and gluing photoenlarged music to mats. This volunteer group has prepared about 700 titles for the large-print scores collection, while only about 100 titles have been produced commercially. Items requested by other government agencies, particularly copies of legislation, are often assigned to volunteers for brailling.

NLS anticipates that volunteers will continue to make significant contributions in the future and will combine their skills with new technology, especially for production of braille books, which have become increasingly costly over the last decade. Advance planning for mass production of braille materials includes the possibility of volunteer braillists sharing the use of complex and expensive equipment such as computers and cassette-braille machines in central locations similar to recording studios.

Public Education

The 1969 study by Nelson Associates, Inc., which recommended use of radio and television advertising to reach potential users, was a major turning point in the NLS public education program. Previously, direct-mail campaigns, ties to cooperating agencies, and use of exhibits at conferences of health, educational, and service organizations representing the interests of handicapped individuals were the central components of NLS outreach activities. The first formal NLS public education policy evolved in 1974 from the Nelson study. While recognizing that reaching potential patrons through direct mail and organizational intermediaries was useful and should be continued, the policy was aimed at developing a more comprehensive approach to making the eligible population aware of the national reading program. The policy called specifically for use of the mass media by way of radio and television public service announcements, appearances on selected national interview shows, production of audiovisual presentations to publicize services, and print materials aimed at specific audiences.

Subsequently, NLS produced a series of printed brochures, posters, and related information materials—color coordinated and compatible with newly designed exhibit units—to enhance NLS national exhibit and direct-mail efforts. The exhibit units contained a slide show, "Sounds Like My Kind of Book," and featured life-size photographic displays of patrons using recorded and brailled books and magazines, and playback equipment. Network libraries also used the material at local and regional workshops, conferences, and other community events. In addition, NLS began to promote its music services and produced new bilingual materials to inform Spanish-speaking residents and citizens about library services.

In 1976, planning began for a national mass-media campaign, and a pilot project was launched to determine whether potential library users in selected areas could be reached effectively by radio and television. (By this time, 2 million to 3 million persons were estimated to be eligible for but not using the national program.) Librarians were actively involved in the early planning and execution of the campaign for several reasons: publicity would generate new library users and thus directly affect network librarians; local resources were necessary because of the limited budget for the project; and nationally produced and executed campaigns had too often produced disappointing results for other agencies.

With guidance from NLS, network librarians personally distributed the announcements to broadcasters in their areas, stressing basic program themes and including a toll-free number to call for more information. By 1978, public service announcements were on the air in seven areas where there were network libraries: Birmingham, Alabama; Indianapolis, Indiana; Seattle, Washington; the Quad Cites of Iowa and Illinois (Moline, Rock Island, Bettendorf, and Davenport); Colorado; Maine; and South Carolina. In addition, librarians conducted a range of local and regional activities to support the public education campaign: direct mailings, appearances on radio and television talk shows, press releases, and more, to keep the campaign visible. The campaign was endorsed nationally by the Advertising Council, Inc.

In the campaign areas, new readers increased by about 45 percent. Independent evaluators estimated that public awareness increased about 14 percent. Evaluators also concluded that local and regional public education activities increased the rate of response and recommended that NLS continue its coordinated public education programming. In 1978, NLS won the John Cotton Dana Public Relations Award for the pilot project.

By 1983, similar programming was in effect throughout most of the country. Materials were aimed specifically at reaching eligible nonusers through friends, relatives, and professional referral sources. Special emphasis was given to raising awareness among blacks and individuals who were institutionalized—the largest underserved areas of the eligible, nonusing public as identified by AFB nonuser and Market Facts user studies. Future campaigns are expected to address more fully the need to increase awareness among blacks as well as Hispanics, many of whom erroneously believe, according to NLS research, that they must read braille to use the program.

Broadcast and other campaign materials are continually updated; network library participation is guided by NLS staff and the NLS manual *Reaching People*. NLS staff continue to participate in and exhibit at some twenty-five national conferences and conventions each year. Direct mailings are conducted to reach doctors, nurses, therapists, and other health professionals, as well as teachers, counselors, social workers, and people in community services. Public and special libraries nationwide receive frequent communications from NLS about library services for blind and physically handicapped readers.

ALA standards adopted in 1979 have helped stimulate public education programming as an integral part of overall library service. The result of NLS and network library efforts is a nationally coordinated outreach program that combines the use of mass media with exhibits, publications, speakers' bureaus, direct mailings, and general publicity.

International Relations

While international organizations concerned with the welfare of blind people have played a substantial part in issues related to reading materials for handicapped individuals, most of their efforts have been directed toward the production of materials rather than the acquisition, storage, and retrieval of information. Believing that improvement of library services to handicapped people can best be addressed by an organization of librarians, NLS in 1974 approached the International Federation of Library Associations (IFLA) about sponsoring an organization devoted to the needs of libraries for blind or physically handicapped patrons. In 1977, the Working Group of Libraries for the

Blind (which in 1979 was renamed the Round Table of Libraries for the Blind) was established under the Hospital Libraries Section of IFLA. The group meets annually to address such issues as standardizing talking-book formats, speeds, and master-recording practices; dealing with copyright problems, postal regulations, and customs laws; lessening duplication of effort among participating countries; and finding other ways to expand and improve service to blind and physically handicapped persons worldwide.

The Working Group's first meeting, held in 1978 in Czechoslovakia, was attended by more than sixty librarians, who discussed these matters and developed long- and short-term goals for their activities. That same year, NLS launched an international exchange program to increase its own foreign-language collection and extend English-language services to other countries. Excess copies of braille books and current publications such as *Talking Book Topics, Braille Book Review,* and the newsletters *News* and *Update* were offered in exchange for braille and recorded titles. The Central Republic Library for the Blind in Moscow received the first exchange materials from NLS.

Since that time, international cooperation has expanded to include seminars and conferences in many parts of the world, with UNESCO, IFLA, and the World Council for the Welfare of the Blind all playing active roles. UNESCO and AFB have funded a comprehensive international directory to be maintained by the IFLA Round Table, which will guide information-seekers to 500 libraries and their services to blind and physically handicapped people. The Round Table has also begun a project to establish international bibliographic control and aims ultimately for a global union catalog.

NLS offers special-format materials for exchange or loan, and its cassette player can be adapted by the manufacturer for foreign use; the manufacturer has sold more than 20,000 machines to twenty-eight agencies in nineteen countries. NLS receives visitors from many foreign countries and offers information and advice on implementing comparable technology, standards, or procedures in serving blind and physically handicapped readers.

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IFLA's August 1981 conference in Leipzig, Germany, focused on the International Year of Disabled Persons. The Round Table was commended for its work in adding library service to blind persons to the UNESCO Public Library Manifesto, in helping to establish braille centers in Africa, and in developing an international study on copyrights in respect to materials for the handicapped.

NLS also participated in a Japanese Library Association convention in 1981. Japan's eighty-three braille libraries are independent organizations that vary greatly in the facilities and services they offer. Stimulating interest in a national library service was the primary purpose of the visit by NLS staff, but discussions with Japanese manufacturers of recording and playback equipment may be equally fruitful.

In September 1982, the International Conference on English Braille Grade 2, cosponsored by the Braille Authority of North America and the Braille Authority of the United Kingdom, took place at NLS. The purpose of the meeting was to discuss and recommend changes that will eliminate remaining differences in the British and American systems, with regard to both readability and computer production of braille. Delegates and observers from Australia, Canada, Hong Kong, New Zealand, South Africa, the United Kingdom, and the United States established an international coordinating committee to promote uniformity in research and code development. Made up of representatives from these seven participating countries, the committee—mostly through correspondence—will guide research projects, plan for a second braille conference, and develop a more permanent body for establishing and monitoring English braille code rules and practices. The World Council for the Welfare of the Blind was represented at the conference by a delegate from Sweden.

NOTES

1. P.L. 71-787, March 3, 1931, chap. 400, U.S., *Statutes at Large* 46:1487. Hereafter cited as *Statutes*.

2. Public Resolution No. 135, March 4, 1931, chap. 526, *Statutes* 46:1628. During this period, the federal fiscal year ran from July 1 to June 30. Since 1974, it has ended September 30. Throughout this chapter, the fiscal year will be cited by the year in which its last month falls.

3. U.S., Library of Congress, *Report of the Librarian of Congress*, 1897 (Washington, D.C.: Government Printing Office, 1898), p. 39. The title of this publication

varies. Hereafter it will be cited as *Annual Report*. See also *Annual Report*, 1901, pt. 2, p. 196, and ibid., 1946, p. 167.

4. Victoria Faber Stevenson, *Etta Josselyn Giffin: Pioneer Librarian for the Blind* (Washington, D.C.: National Library for the Blind, 1959), pp. 39–40.

5. Ibid., pp. 79–84, 90; see also *Annual Report*, 1912, pp. 106–108.

6. *Annual Report*, 1925, pp. 140–141.

7. Helen Keller to Emerson Palmer, secretary of the New York Board of Education, [1909], quoted by Robert B. Irwin, *As I Saw It* (New York: American Foundation for the Blind, 1955), p. 14.

8. Charles W. Holmes, president of the Perkins alumni association, to American Association of Workers for the Blind convention in 1905, quoted by Irwin in *As I Saw It*, pp. 22–23.

9. *Annual Report*, 1920, p. 101.

10. Ibid., 1919, p. 93.

11. Ibid.

12. Ibid., 1931, pp. 402–403.

13. Adelia M. Hoyt, *Unfolding Years: The Events of a Lifetime* (Washington, D.C.: Walter Conway, 1950), pp. 78–79, 76.

14. Frances A. Koestler, *The Unseen Minority: A Social History of Blindness in America* (New York: David McKay, 1976), p. 111.

15. *Annual Report*, 1931, p. 403.

16. *American Library Association Bulletin* 1:44 (July 1907).

17. *Annual Report*, 1919, p. 94.

18. Koestler, *Unseen Minority*, p. 110; for some other contributing authors, see *American Library Association Bulletin* 16:221 (July 1922).

19. *American Library Association Bulletin* 16:220 (July 1922).

20. *Annual Report*, 1924, pp. 150, 152.

21. Charlotte Matson, comp., *Books for Tired Eyes: A List of Books in Large Print* (Chicago: American Library Association, 1923).

22. *American Library Association Bulletin* 20:399 (October 1926).

23. Donald G. Patterson, "Development of the Regional Library System and Growth of the Service," in *National Conference, Library Service for the Blind: Proceedings, November 19-20, 1951* (Washington, D.C.: Library of Congress, 1952), p. 56. Hereafter cited as *1951 Conference*.

24. Koestler, *Unseen Minority*, p. 112.

25. See Carol I. Alderson, "The Library and the Blind," *Library Journal* 65:195 (March 1, 1940).

26. *Annual Report*, 1924, p. 150, quoting a contemporary AFB annual report.

27. Koestler, *Unseen Minority*, p. 82.

28. For discussions of the development of interpointing, see Koestler, *Unseen Minority*, pp. 101–102, 104–107; Irwin, *As I Saw It*, pp. 59–65; and R. B. Irwin, "Survey of Library Work for the Blind in the United States and Canada," *American Library Association Bulletin* 23:250 (August, 1929).

29. U.S., Congress, House, Committee on the Library, *Books for the Adult Blind:*

Hearing on H. R. 9042, 71st Cong., 2d sess., March 27, 1930, M. C. Migel, pp. 2–3, Adelia M. Hoyt, p. 24.

30. Francis R. St. John, *Survey of Library Service for the Blind, 1956* (New York: American Foundation for the Blind, 1957), pp. 9–10. Hereafter cited as *1956 Survey*.

31. House, Committee on the Library, *Books for the Adult Blind: Hearing on H. R. 9042*, 71st Cong., 2nd sess., March 27, 1930, Robert B. Irwin, p. 4.

32. Irwin, "Survey of Library Work for the Blind in the United States and Canada," p. 251.

33. P.L. 58–171, April 27, 1904, chap. 1612, *Statutes* 33:313.

34. Stevenson, *Etta Josselyn Giffin*, p. 66.

35. Irwin, "Survey of Library Work for the Blind in the United States and Canada," p. 251.

36. House, Committee on the Library, *Books for the Adult Blind: Hearing on H. R. 9042*, 71st Cong., 2d sess., March 27, 1930, M. C. Migel, p. 3.

37. Ibid., Robert B. Irwin, p. 5.

38. See, for example, Koestler, *Unseen Minority*, pp. 117–128, and Robert B. Irwin, *As I Saw It*, pp. 72–76.

39. U.S., House, Committee on House Administration, Subcommittee on Library and Memorials, *Talking Books for Quadriplegics and the Near Blind: Hearing on H. R. 2853*, 88th Cong., 1st sess., July 30, 1963, John F. Nagle, pp. 13–14.

40. *Annual Report*, 1937, p. 310.

41. Ibid., 1932, p. 280.

42. Ibid.

43. Ibid., 1933, p. 183.

44. Ibid., 1932, p. 271.

45. Ibid., 1934, p. 219.

46. Ibid., 1932, p. 274.

47. Ibid., pp. 274, 278.

48. Robert B. Irwin, "The Talking Book," in *Blindness: Modern Approaches to the Unseen Environment*, ed. Paul A. Zahl (Princeton, N.J.; Princeton University Press, 1950), pp. 346–347, 352.

49. For the development of the talking book, see, for example, Irwin, "The Talking Book," pp. 347–350; Koestler, *Unseen Minority*, pp. 153, 130–135; and Irwin, *As I Saw It*, pp. 86–90, 100–101.

50. U.S., Congress, Senate, Committee on Education and Labor, *Books for the Adult Blind: Report to Accompany H. R. 13817*, 72d Cong., 2d sess., 1933, S. Rept. 1246, and U.S., Congress, Senate, *Congressional Record*, 72d Cong., 2d sess., 1933, 76, pt. 5:5521–5522.

51. P.L. 72–439, March 4, 1933, chap. 279, *Statutes* 47:1570.

52. P.L. 73–214, May 9, 1934, chap. 264, *Statutes* 48:678.

53. *Annual Report*, 1935, p. 279.

54. Ibid., 1936, pp. 281–282; see also *American Library Association Bulletin* 30:824–826 (August, 1936).

55. P.L. 74–139, June 14, 1935, chap. 242, *Statutes* 49:374.

56. M. C. Migel, president of AFB, to Herbert Putnam, the Librarian of Congrees, July 24, 1935, quoted by Koestler in *Unseen Minority*, p. 146; this discussion of the origination of the WPA operation draws on pp. 144–147.

57. Koestler, *Unseen Minority*, p. 175.

58. *Annual Report*, 1936, pp. 292–293.

59. U.S., Congress, House, Committee on the Library, *Books for the Adult Blind: Hearing on H. R. 168*, 75th Cong., 1st sess., January 23, 1937, Lucille Goldthwaite, pp. 9–10.

60. P.L. 75–47, April 23, 1937, chap. 125, *Statutes* 50:72.

61. Koestler, *Unseen Minority*, pp. 149–150.

62. *Annual Report*, 1938, pp. 376–377.

63. Koestler, *Unseen Minority*, p. 174.

64. P.L. 76–562, June 6, 1940, chap. 255, *Statutes* 54:245.

65. *Annual Report*, 1941, p. 346; ibid., 1937, p. 296.

66. Ibid., 1937, p. 310.

67. Ibid., 1939, p. 393.

68. Koestler, *Unseen Minority*, p. 150.

69. P.L. 76–118, June 7, 1939, chap. 191, *Statutes* 53:812–813.

70. U.S., Congress, House, Committee on the Library, *Providing Books for the Adult Blind: Report to Accompany H. R. 5136*, 76th Cong., 1st sess., 1939, House Rept. 456.

71. P.L. 75–523, May 16, 1938, chap. 227, *Statutes* 52:378.

72. This was not always a disadvantage. In January 1941, a minister wrote Alexander Scourby that his narration of *Les Miserables* was so sensitive that the reader could "actually feel the pulse and reality of events," as he had not when he read the work in print. Quoted by Koestler in *Unseen Minority*, pp. 155–156.

73. Some years later, former presidents Harry S Truman and Herbert Hoover recorded, respectively, parts of *Year of Decision*, and *The Ordeal of Woodrow Wilson*. Other authors who subsequently narrated their works include John Kieran (*John Kieran's Nature Notes*, in its entirety), Bertrand Russell (*Freedom Versus Organization*), William Somerset Maugham (*Of Human Bondage*), Christopher Morley (*Where the Blue Begins*, in its entirety), Cornelia Otis Skinner (*Our Hearts Were Young and Gay*), John Mason Brown (*Many a Watchful Night*), Bob Hope (*I Never Left Home*), Jacques Barzan (*Teacher in America*), John P. Marquand (*The Late George Apley*), Red Barber (*Rhubarb in the Catbird Seat* and *The Broadcasters*), Robert E. Sherwood (*Roosevelt and Hopkins*), Ogden Nash (*Everyone But Thee and Me; Ogden Nash Reads Ogden Nash*), Joan Crawford (*My Way of Life*), Ilka Chase (*Dear Instructor; I Love Miss Tilli Bean; Worlds Apart*), Victor Borge (*My Favorite Intermission*), Ruth Gordon (*Myself among Others*), Lilli Palmer (*A Time to Embrace*), and Pearl Bailey (*Pearl's Kitchen*).

74. Since then, many others have been added to the list, including Jose Ferrer, Zachary Scott, Jessica Tandy, Tom Ewell, Ossie Davis, Roddy McDowell, and Peggy Wood.

75. *Annual Report*, 1937, p. 309.

76. Ibid., 1936, p. 280.
77. Ibid., 1937, p. 284.
78. Ibid., 1932, p. 279.
79. Ibid., 1936, p. 285.
80. Koestler, *Unseen Minority*, p. 112; *Braille Book Review* 3, no. 1 (January, 1934):1.
81. So described by an executive of AFB in a letter to the service. Quoted in *Annual Report*, 1936, p. 287.
82. *Annual Report*, 1936, p. 284.
83. Ibid., 1935, p. 280.
84. Ibid., 1937, p. 282.
85. Ibid., p. 306.
86. Ibid., 1939, pp. 396–397; see Martin A. Roberts, "Embossed Books, Talking Book Records, and Talking Book Machines for the Blind—Federal Contribution to the Cultural Welfare of the Blind," in *Proceedings of the Eighteenth Biennial Convention of the American Association of Workers for the Blind*, 1939 (n.p.), p. 122; see also pp. 11–12.
87. *Annual Report*, 1939, p. 397.
88. Verner W. Clapp, "Some Problems in Library Service for the Blind," in *Proceedings of the Nineteenth Biennial Convention of the American Association of Workers for the Blind*, 1941 (n.p.), p. 49.
89. *Annual Report*, 1934, p. 224.
90. See, for example, *Annual Report*, 1935, p. 284; ibid., 1938, p. 361; and Adelia M. Hoyt, "The Place and Influence of Hand-Copied Books in Libraries for the Blind," in *Proceedings of the Seventeenth Biennial Convention of the American Association of Workers for the Blind*, 1937 (n.p.), p. 105.
91. Hoyt, "The Place and Influence of Hand-Copied Books in Libraries for the Blind," p. 103.
92. Adelia M. Hoyt, "The Value of a Students' Library," in *Proceedings of the Sixteenth Biennial Convention of the American Association of Workers for the Blind*, 1935 (n.p.), pp. 124–128.
93. *Annual Report*, 1937, p. 304.
94. Ibid., 1939, p. 397.
95. Ibid., 1936, p. 299.
96. House, Committee on the Library, *Books for the Adult Blind: Hearing on H. R. 168*, 75th Cong., 1st sess., January 23, 1937, Lucille Goldthwaite, pp. 10–11. Goldthwaite was discussing talking books but her comments applied to braille as well; see below.
97. Lucille A. Goldthwaite, "Book Selection," in *Proceedings of the Sixteenth Biennial Convention of the American Association of Workers for the Blind*, 1935, p. 121.
98. Margaret Riddell, "A Survey of the Reading Interests of the Blind," in *Proceedings of the Eighteenth Biennial Convention of the American Association of Workers for the Blind*, 1939, pp. 128–133.

99. Alice Rohrback, "Report of the American Red Cross Transcribing Activities," in *Proceedings of the Eighteenth Biennial Convention of the American Association of Workers for the Blind*, 1939, p. 134.

100. *Annual Report*, 1934, pp. 224, 229.

101. Ibid., 1936, p. 299.

102. Ibid., 1937, p. 309.

103. Ibid., 1945, p. 108.

104. Ibid., 1937, p. 309; House, Committee on the Library, *Books for the Adult Blind: Hearing on H. R. 168*, 75th Cong., 1st sess., January 23, 1937, p. 21.

105. House, Committee on the Library, *Books for the Adult Blind: Hearing on H. R. 168*, 75th Cong., 1st sess., January 23, 1937, pp. 22–23.

106. Division of Books for the Adult Blind, "Annual Report for the Fiscal Year 1942–1943," typewritten archival copy, National Library Service for the Blind and Physically Handicapped, the Library of Congress, Washington, D.C., p. 1. Hereafter, archival copies of the annual report of this agency, whatever name it bore at the time, are cited as "Annual Report."

107. Ibid., p. 3

108. Ibid., p. 2.

109. P.L. 77-726, October 1, 1942, chap. 575, *Statutes* 56:764.

110. P.L. 78-338, June 13, 1944, chap. 246, *Statutes* 58:276.

111. U.S., Congress, House, Committee on Labor, Subcommittee on Aid to Physically Handicapped, *Aids to Physically Handicapped: Hearings Pursuant to H. R. 45*, pt. 17, *Aid Rendered by the Library of Congress to the Physically Handicapped*, 79th Cong., 1st sess., October 3, 1945, Dr. George W. Corner, p. 1881.

112. "Annual Report," 1944, p. 9.

113. Ibid., 1942, May 27, 1942, memorandum. Among the War Imperative Books were *They Were Expendable*, *Into the Valley*, and *One World*. Wendell Willkie narrated a special introduction to the last.

114. Ibid., p. 2.

115. *Annual Report*, 1941, p. 43.

116. "Annual Report," 1946, p. 1.

117. Ibid., pp. 6, 14; ibid., 1947, p. 3.

118. P.L. 79-661, August 6, 1946, chap. 868, *Statutes* 60:908.

119. *Annual Report*, 1946, p. 260.

120. "Annual Report," 1947, p. 11.

121. P.L. 80-197, July 17, 1947, chap. 262, *Statutes* 61:373.

122. *Code of Federal Regulations* (1952), title 44, chap. V, sec. 501.6.

123. Koestler, *Unseen Minority*, p. 161.

124. See Koestler, *Unseen Minority*, pp. 161–163; two articles in *1951 Conference:* Anne MacDonald, "Program of the National Committee for Recording for the Blind, Inc.," pp. 47–50, and Mildred C. Skinner, "Special Recording of Educational and Professional Literature by Volunteers," pp. 51–54; as well as two articles in *Outlook for the Blind* 41 (December 1947): Don Crawford, "Recordings for College

Students," pp. 284–285, and Alison B. Alessios, "The Case for Recording—As a Librarian Sees It," pp. 286–288.

125. See *Conference on Volunteer Activities in Recording and Transcribing Books for the Blind: Proceedings, December 1–2, 1952* (Washington, D.C.: Library of Congress, 1954): Anne MacDonald, "Current Facts about Services Available from and Accomplishments of the National Committee for Recording for the Blind, Inc.," pp. 11–14; Anne MacDonald, "Expanding and Stimulating the Uses of Recorded Materials," p. 29; Marjorie Postley, "Volunteer Recording Services for the Blind," pp. 15–16; Elsie R. Mueller, "Uses of Recordings by Students," p. 21; Mrs. W. D. Earnest, Jr., "Exceptional Uses of Recorded Materials," p. 25; Maybelle K. Price, "Hand Transcribing of Books into Braille by Volunteers," pp. 35–36; Pauline Packard, "Textbook Transcribing in New Jersey," pp. 38–40.

126. "Report of the Resolutions Committee," *National Conference on Volunteer Activities*, pp. 56–57.

127. House, Committee on Labor, Subcommittee on Aid to Physically Handicapped, *Aid Rendered by the Library of Congress to the Physically Handicapped*, 79th Cong., 1st sess., October 3, 1945, p. 1881.

128. Ibid., pp. 1881–1884.

129. "Annual Report," 1946, p. 14.

130. Charles H. Whittington, "Report on American Foundation for the Blind Talking Books: Records and Machines," in *1951 Conference*, p. 64; William Watkins, "Talking Book Record Program: American Printing House for the Blind," in *1951 Conference*, p. 68.

131. Richard K. Cook, "A Summary of Research and Development Activities on Talking Book Systems," in *1951 Conference*, p. 71.

132. *Annual Report*, 1953, p. 141.

133. Koestler, *Unseen Minority*, pp. 170–171.

134. Patterson, "Development of the Regional Library System and Growth of the Service," pp. 58–59. Methods of computing collection and readership statistics have varied through the years. Contemporary figures are used in this history, although elsewhere they may have been adjusted to make them consistent with modern usage.

135. Willard O. Youngs, "Financial Support of Regional Libraries for the Blind," in "Proposed Legislation Affecting Libraries and Regional Library Service for the Blind: Proceedings of the Section of Public Library Administration, Nineteenth Annual Institute of Government, 1954," mimeographed (Seattle: University of Washington, Bureau of Governmental Research and Services, 1955), p. 29.

136. "Annual Report," 1950, p. 4.

137. Patterson, "Development of the Regional Library System and Growth of the Service," pp. 58–59.

138. Charles Gallozzi, "Requirements of Space, Equipment, and Personnel in Terms of Existing Service and Future Expansion," in *1951 Conference*, p. 41.

139. U.S., Library of Congress, Division for the Blind, *Progress Report*, no. 1 (April 1952):1–3.

140. "Report of the Resolutions Committee . . . ," in *1951 Conference*, p. 81.

The Advisory Committee functioned for only a few years. Conference resolutions discussed below may be found on pp. 81–82. See also Division for the Blind, *Progress Report*, no. 1 (April 1952):1.

141. Grace D. Lacey, "Policies and Practices in a Distributing Library for the Blind as Illustrated by the Wayne County Library for the Blind, Detroit, Michigan," in *Proceedings of the Eighteenth Biennial Convention of the American Association of Workers for the Blind*, 1939, pp. 199–200.

142. "Annual Report," 1953, p. 14.

143. Division for the Blind, *Progress Report*, no. 1 (April 1952):11.

144. "Annual Report," 1954, p. 19.

145. Ibid.

146. *Seventy-fourth Annual Conference Proceedings of the American Library Association*, 1955 (Chicago: American Library Association, n.d.), pp. 87–88.

147. See Alderson, "The Library and the Blind," p. 195.

148. Division for the Blind, *Progress Report*, no. 1 (April, 1952):11.

149. "Annual Report," 1953, p. 14; Division for the Blind, *Progress Report*, no. 2 (July 1952):9.

150. *Seventy-fourth Annual Conference Proceedings of the American Library Association*, 1955, p. 87.

151. "Summary of Discussion Following Mr. Patterson's Paper," in *1951 Conference*, pp. 60–61.

152. Division for the Blind, *Progress Report*, no. 2 (July 1952), pp. 3–4.

153. Blanche P. McCrum, "Selection of Titles for Talking Book Records and Books in Braille," in *1951 Conference*, pp. 3–11.

154. Reprinted in part by St. John in *1956 Survey*, pp. 72–74.

155. "Annual Report," 1952, p. 1.

156. *Annual Report*, 1955, p. 4.

157. M. Robert Barnett, executive director of AFB, to Francis St. John, November 23, 1955, quoted by St. John in *1956 Survey*, pp. 1–3.

158. St. John, *1956 Survey*, p. 3.

159. Ibid., pp. iv-vii, 3–4.

160. Ibid., pp 43–44.

161. Ibid., pp. 59–60.

162. Ibid., pp. 60-61.

163. Ibid., p. 51. Italics supplied.

164. Ibid., pp. 54–56.

165. Robert S. Bray, director of the Division for the Blind, Library of Congress, in conversation with Frances Koestler, July 22, 1971, quoted by Koestler in *Unseen Minority*, p. 174.

166. St. John, *1956 Survey*, p. 54.

167. Ibid., pp. 55–57.

168. Ibid., pp. 68–70.

169. Ibid., pp. 52–53.

170. Ibid., pp. 50–52.

171. Ibid., pp. 48–49.
172. Ibid., p. 52; cf. Table 2, on p. 49.
173. Ibid., pp. 52, 62–63.
174. Ibid., pp. 24–27.
175. Ibid., pp. 19, 100.
176. Ibid., pp. 99, 29–32, 100–101.
177. Ibid., p. 39.
178. Ibid., pp. 36–37.
179. Ibid., pp. 37–39.
180. Ibid., pp. 40–41.
181. Ibid., pp. 5, 63, 20, 58, 20–22.
182. Ibid., pp. 99, 104, 19–22 passim.
183. Ibid., pp. 90–96 passim; see also pp. 37, 20, 103, 108–109.
184. Ibid., pp. 71–89 passim, 103–104, 107.
185. P.L. 82–446, July 3, 1952, chap. 566, *Statutes* 66:326.
186. See in *1951 Conference:* Margaret M. McDonald, "Service of Talking Book Records and Books in Braille in the Regional Libraries" and discussion following, pp. 30–31; "Report of the Resolutions Committee," p. 82; and Gallozzi, "Requirements of Space, Equipment, and Personnel in Terms of Existing Service and Future Expansion," p. 40.
187. *Annual Report,* 1953, p. 58.
188. St. John, *1956 Survey,* pp. 87–88, 108.
189. Ibid., p. 104.
190. Ibid., pp. 98–100.
191. Ibid., p. 5.
192. Ibid., p. 22.
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209. P.L. 90–206, December 16, 1967, *Statutes* 81:621–622.

210. P.L. 89–511, Title IV, July 19, 1966, *Statutes* 80:315–318.

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212. *Division for the Blind and Physically Handicapped: A Survey of Reader Characteristics, Reading Interests, and Equipment Preferences: A Study of Circulation Systems in Selected Regional Libraries,* prepared by Nelson Associates, Inc., Washington, D.C. April 1969. Hereafter referred to in the text as the Nelson study.

213. *A Survey to Determine the Extent of the Eligible Population Not Currently Being Served or Not Aware of the Programs of the Library of Congress, National Library Service for the Blind and Physically Handicapped,* prepared by the American Foundation for the Blind, New York, 1979. Hereafter referred to in the text as the AFB nonuser study.

214. *Readership Characteristics and Attitudes: Service to Blind and Physically Handicapped Users,* prepared by the Public Sector Research Group of Market Facts, Inc., Washington, D.C., September 30, 1981 (Washington, D.C.: National Library Service for the Blind and Physically Handicapped, 1981). Hereafter referred to in the text as the Market Facts user study.

215. American Library Association, Association of Specialized and Cooperative Library Agencies, *Standards of Service for the Library of Congress Network of Libraries for the Blind and Physically Handicapped* (Chicago: American Library Association, 1979).

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217. See, for example, testimony by John Gashel, chief of the Washington office, National Federation of the Blind, U.S. Congress, House, Committee on Appropriations, *Legislative Branch Appropriations for 1976: Hearings,* 94th Cong., 1st sess., pt. 2, pp. 1418–1423.

218. "The 1980s Will Be the Decade of the Hispanics," *La Luz* 9, no. 6

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Appendix

The Library of Congress has provided library services for blind and, since 1966, physically handicapped readers, under the administration of the following Librarians of Congress:

John Russell Young	1897–1899
Herbert Putnam	1899–1939
Archibald MacLeish	1939–1944
Luther Harris Evans	1945–1953
Lawrence Quincy Mumford	1954–1974
Daniel J. Boorstin	1975–

From 1897 to 1946, the Library of Congress provided direct library service to blind readers through Service for the Blind under:

Etta Josselyn Giffin	1897–1912
Gertrude T. Rider	1912–1925
Margaret D. McGuffey	1925–1927
Maude G. Nichols	1927–1946

In 1946, Service for the Blind, still headed by Maude Nichols, became part of the Library of Congress organizational unit that in 1931 had begun producing and distributing to regional libraries for circulation reading materials for blind readers. Initially called the Project, Books for the Blind, and now known as the National Library Service for the Blind and Physically Handicapped, this program has been administered by:

Dr. Herman H. B. Meyer	1931–1935
Martin A. Roberts	1935–1940
Robert A. Voorus	1940–1944
Joseph P. Blickensderfer	1945–1946
Xenophon P. Smith	1946–1948
George W. Schwegmann, Jr.	1948–1951
Donald G. Patterson	1951–1957
Robert S. Bray	1957–1972
Frank Kurt Cylke	1973–

Part Two

Users

Hylda Kamisar

When the Library of Congress program for handicapped readers was established in 1931,[1] its service consisted solely of loaning embossed books to blind adults through regional libraries. But in 1931, as today, relatively few people used braille or other raised character systems as a primary reading medium. The Library of Congress annual report for 1932 shows that only a small fraction of the blind adult population at the time were borrowing embossed books.[2]

Most readers in the service during the early 1930s were referred to The Library by state offices from which blind adults were receiving other services, for example, rehabilitation training or financial aid. This phenomenon was probably due to the emergence of a legal standard, used for the first time in the 1930s, to define "blindness" for the purposes of determining eligibility for state programs. While the issue of "legal blindness" did not arise for users of the Library of Congress's program as long as it was using only embossed materials—sighted people were unlikely to divert scarce resources away from visually impaired people—states around 1933 began to develop the legal standard still used in much of the country today, including federal and state statutes: central visual acuity of 20/200 or less in the better eye with corrective glasses or central visual acuity of more than 20/200 if there is a visual field defect in which the peripheral field is contracted to such an extent that the widest diameter of the visual field subtends an angular distance no greater than twenty degrees in the better eye. But though The Library did not at first require that patrons meet this legal standard, many did, as they were referred from state agencies requiring meeting the standard.

The low rate of use of braille was probably due to two related factors: (1) the vast majority of persons who are blind become so in adulthood, particularly in advanced age; and (2) tactile sensitivity

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tends to diminish with progressing age, and it is, therefore, often difficult for older adults to master braille to the degree that reading is practical.

As soon as technological developments made the talking book feasible, legislation was passed by Congress to include sound reproduction records in the Library of Congress program.[3] Following this program change, many additional thousands of blind adults could become active library users, since the recorded medium was accessible without special training or ability. An eligibility requirement, that patrons meet the above standard of legal blindness, widely accepted by then, was adopted to prevent sighted persons from using the talking books meant for visually handicapped readers; the requirements remained unchanged until 1952, when service to blind children was made possible by an alteration in the basic law.[4]

It had long been recognized by librarians and other concerned parties that the general population included a significant number of physically handicapped individuals who were unable to use standard printed materials for reasons other than legal blindness. This group included persons with visual impairments that prevented them from reading newspapers and conventional print books and those with paralysis, palsy, missing arms or hands, or extreme weakness or restriction of movement that made it difficult or impossible to hold a book or turn pages. In response to this evident need, the law governing the Library of Congress program of service to blind readers was broadened in 1966 to include "other physically handicapped readers certified by competent authority as unable to read normal printed materials as a result of physical limitations, under regulations prescribed by the Librarian of Congress for this service."[5] With this most recent change in the enabling legislation, legal blindness ceased to be a requisite for service; eligibility is extended to anyone unable to read or use standard printed material because of visual or physical limitations. The following categories of persons are eligible:

(1) Blind persons whose visual acuity, as determined by competent authority, is 20/200 or less in the better eye with correcting glasses, or whose widest diameter of visual field subtends an angular distance no greater than 20 degrees.

(2) Persons whose visual disability, with correction and regardless

of optical measurement, is certified by competent authority as preventing the reading of standard printed material.

(3) Persons certified by competent authority as unable to read or unable to use standard printed material as a result of physical limitations.

(4) Persons certified by competent authority as having a reading disability resulting from organic dysfunction and of sufficient severity to prevent their reading printed material in a normal manner.[6]

In addition to individuals, institutions such as nursing homes, hospitals, and senior citizen centers may borrow reading materials and sound reproducing equipment for the use of eligible residents or patrons. Schools where handicapped students are enrolled may also use library materials, as long as each eligible student is individually certified. Eligibility may be permanent or temporary, for example, while recuperating from eye surgery.

Eligibility does not extend to individuals who are unable to read because of educational or mental deficiencies. Nor is service available outside the United States and its territories, except to American citizens temporarily domiciled abroad, who are served directly by the Library of Congress's National Library Service for the Blind and Physically Handicapped (NLS), in Washington, D.C.

The application process involves completion of a brief form indicating the type of disability preventing the applicant from reading standard printed material and certification by a competent authority. *Competent authority* is defined to include doctors of medicine, doctors of osteopathy, optometrists, nurses, therapists, social workers, and librarians. In the case of reading disability from organic dysfunction, *competent authority* is defined as doctors of medicine or doctors of osteopathy, who may consult with colleagues in associated disciplines.

In 1932, the first year for which even partial program statistics are available, 3,225 users were served nationally and 50,200 items were circulated.[7] In 1980, 792,980 users of braille, disc, and cassette tape books and magazines were reported by the national network of regional and subregional libraries and circulation of books and magazines rose to 16,888,600. Several factors contributed to this enormous program growth: extension of eligibility to the physically and visually handicapped; expansion of the service network from the original nineteen libraries to 160; development of a greatly enlarged collection that reflects a wide range of subjects, interests, and formats; technological advancements that have speeded book production and delivery; and an improved awareness of the program brought about by a concerted effort at public education. One other factor deserves mention: the growing proportion of aged persons in the general United States population. Diminished visual acuity is often caused by certain eye diseases prevalent among persons in the over-sixty age category, for example, cataract, glaucoma, and macular degeneration. Arthritis and stroke, commonly associated with the aging process, are two other conditions that may result in physical impairment that prevents reading in the traditional way. Finding oneself cut off from such a vital activity as reading can be a traumatic experience that talking book service helps to alleviate.

Reader characteristics such as age, sex, educational attainment, type of handicap or handicaps, and reading interests have major implications for collection development, equipment design, communication, and other aspects of the NLS program. On a continuing basis, considerable effort is expended on the gathering and analysis of data about the user population. This feedback process takes many forms, including formal surveys of active readers. Since 1966, two full-scale surveys have been conducted by professional survey firms under contract to the Library of Congress.[8] These are commonly referred to as the Nelson and the Market Facts surveys.

As Table 4-1 indicates, 50 percent of users are sixty-five years of age and older; more females than males are users; only 19 percent of users are employed or in school, the rest being homemakers, retired, or unemployed; and visual handicaps are, by far, the most prevalent impairment, with a substantial number of patrons having multiple handicaps. These two surveys, taken eleven years apart, show little significant change in user characteristics, apart from an increase in the group sixty-five years of age and over and an increase in physical and multiple handicaps among those served.

TABLE 4–1

Comparison of Patron Characteristics: 1968 and 1979

	1968 Sample %	*1979 Sample %*
Characteristic:		
Age		
Under 14	5	5
15–24	12	6
25–44	14	14
45–64	26	24
65 and over	43	50
Sex		
Male	46	43
Female	54	57
Educational attainment		
Less than 8 years	29	21
High School	42	35
College	40	45*
Current employment status		
Employed	12	10
Student	14	9
Homemaker	20	15
Retired/unemployed	53	66
Living arrangements		
Alone	17	22
With family or friends	76	69
Institution	7	9
Type of handicap		
Visual only	72	64
Physical only	4	7
Multiple	25	29

Source: Market Facts Survey, 3:59, Table 37.

*Includes respondents completing graduate, professional, trade, technical, or vocational school.

From the early years of the program until the mid-1960s, total readership and circulation increased with few variations from a steady growth pace. Since the expansion of the program to include handicapped readers other than the legally blind, growth in the number of readers served and use of the collection has averaged well over 10 percent a year. The service network has increased eightfold. Table 4–2 summarizes program growth since 1932, when only partial statistics were available.

TABLE 4–2

Growth of NLS Program

Year	*Total Readership*	*Total Circulation*	*Number of Participating Libraries*
1932	3,225	50,190	21
1940	28,900	871,900	26
1950	40,770	986,070	27
1960	63,300	1,953,250	30
1970	223,300	6,120,900	48
1980	792,980	16,888,600	160

The large increases in readership continuing throughout the 1970s suggested that user potential was likely to number in the millions; however, no reliable statistics existed on the total number of persons in the United States who are unable to utilize printed material because of visual or physical impairment. Government agencies and private organizations which provide services of one kind or another to the handicapped population use varying estimates of the number of persons to be served, according to their own mission and objectives. Such statistics are seldom based on actual censuses and are more likely to be rough estimates.

Accurate statistics upon which to base projections of program growth were not in hand until 1979, following completion of a special study commissioned by NLS. A principal objective of this massive study was a definitive answer to the question, How many persons in the United States, adults and children, living in households or institutionalized, are unable to read or use standard printed material because of visual and/or physical impairment? This study, usually referred to as the nonuser study, also served to document the characteristics of persons eligible for NLS library services, information which is important in the selection of reading material, determination of reading formats, and development of ancillary equipment such as talking-book machines.

Survey techniques used included mail questionnaires, in-depth interviews by telephone and in person, and site visits to libraries and institutions. More than 200,000 households and 4,000 institutions were contacted initially; the final report incorporated data from more than 7,000 individuals and 1,500 institutions.[9]

The potential number of users was determined to be 1.4 persons in 100 of the household population and one person in four of the institutionalized population.[10] Based on the most current census data, this translates to 3.3 million persons six years of age and older. The majority of eligible persons identified through the survey (71 percent) possess some degree of visual impairment that prevents reading standard print; the rest (29 percent) have other physical impairments that make using regular print materials difficult or impossible.[11]

In 1980, the NLS program, through its network of 160 participating libraries, reached 17 percent of this target population. By contrast, a recent survey of book reading and library usage declared that 51 percent of the general adult population visited a library during the past year.[12] Another survey of library use reported 35 percent of the total population registered with public libraries.[13]

The NLS program is viewed as a surrogate for public library service for readers who cannot make effective use of local public library collections because of their inability to read standard printed material. This concept has shaped the development of the program from its inception and is most clearly expressed in the official selection policy for reading materials, which states, "NLS users should have access to the same books and information made available to the nonhandicapped. The general reading needs of the aged, the young, the professionals, and others should be reflected proportionally in the collection in relation to the overall readership served.[14]

The previously mentioned survey on book reading and library usage defines a "heavy" reader as one who reads twenty-two or more books a year. According to the findings of this survey, 32 percent of library users fall into this category.[15] When this same definition is applied to users of the NLS program, it is found that the average patron is a "heavy" reader, borrowing twenty-two books a year. Braille readers borrow, on the average, fewer books a year than talking-book readers; nonetheless, at seventeen books a year they exceed the "medium" reader definition employed in the survey cited above. It is a not uncommon occurrence for talking-book readers to borrow hundreds of books a year. Indeed, a large segment of the clientele of libraries for the blind and physically handicapped request that a steady flow of books be delivered to their homes and that librarians make selections for them, if necessary, to insure an ample supply of reading material on hand at all times.

Reader interest and demand are subject to ongoing review by NLS staff who are responsible for development of the book and periodical collection. Data are accumulated from a variety of sources as to the subjects and genres most popular with readers and areas of the collection that need strengthening. Users can be quite vocal, both in their appreciation of services received and in their demand for reading materials to suit their personal tastes. As a matter of policy, network librarians forward to NLS for individual consideration any user comments or requests for specific titles not in the collection. Additionally, every year active users serve with network librarians on an advisory committee to assist NLS in focusing on current reader interests and in maintaining a balanced collection. As a result of recommendations from the advisory committee and from individual users, book selection priorities are adjusted from one year to the next.

Both the Nelson survey and the Market Facts survey explored reading preferences and information needs at great length. A comparison of the two surveys demonstrates that reading interests among users of the NLS program have remained fairly constant over the past decade and differ little from the interests of public library patrons in general. According to the Nelson survey "the four categories of reading materials which appeal to the broadest segments of the readership are general interest magazines; current events, news, popular culture; pleasant novels, family stories, and light romances;

and best sellers.''[16] The Market Facts survey reported essentially the same findings, although stated in somewhat different terms: ''At least two of every five readers consider it very important to have best-sellers, historical fiction, humor, and biography available. Another 35 percent to 43 percent of readers consider these topics somewhat important. At least one reader out of three also indicates a high degree of interest in history, detective and mystery stories, literature, religion, travel, and adventure stories.''[17] In the nonuser survey, the five most frequently expressed users' preferences in nonfiction were religion, current events, nature, travel, and do-it-yourself. In fiction the genres most frequently cited as preferences were short stories, humor, mystery/thrillers, bestsellers, and children's books.[18]

As a reflection of these preferences, the NLS book collection is particularly strong in popular fiction, biography, religion (nonsectarian works), family life and health, and home management titles. The periodical collection of about eighty titles similarly reflects these user interests.

Popular demand is a compelling but by no means the sole determinant in collection development. Classic literature and basic works in the arts, sciences, and humanities have their place in the collection just as they do in a typical small public library. Each year, about half the new or replacement titles added are current publications and half are retrospective.

Stereotyping readers because they happen to be handicapped is a pitfall that librarians who serve them soon learn to avoid. For example, handicapped persons do not necessarily have an interest in reading about the experiences of those with handicapping conditions. Persons who are unable to see may still want to read about the visual arts and those with severe physical limitations may request books about skiing and other active sports. There are readers with strong negative feelings about books containing explicit sex scenes or coarse language, yet others just as strenuously object to having their reading screened or labeled in any way that suggests censorship.

The current NLS budget allows for the selection and production of approximately 1,950 book titles annually of the 40,000 print books published each year in the United States. Of the 10,000 periodical titles published in print annually only about eighty can be produced by

NLS in recorded or braille formats. Within these limitations, the book and periodical collection must serve a readership spanning all age groups, satisfy a wide range of interests and tastes, contain materials of enduring value, and fill a heavy demand for bestsellers and light reading.

Judging from the responses of active users and librarians, these requirements are being met, with few exceptions. Textbooks, professional-level reading material, highly technical material, and items of purely local interest fall outside the NLS selection policy and are not provided. Volunteers and private, nonprofit organizations throughout the United States are active in filling these specialized needs.

Heavily illustrated works present practical problems that may not always be overcome and, consequently, are not selected for production in braille or recorded format. Reference books are extremely difficult and expensive to produce; only a few have been added to the collection over the years. A standard reference work such as the *World Almanac* might take several years to transcribe into braille and would consist of at least fifty volumes. As a recorded book, the *World Almanac,* in addition to presenting technical problems in narration, would require a sophisticated indexing system to enable the user to locate specific entries. Significant progress has been made recently in solving the problem of indexing recorded books. A technique called voice indexing has already been used to good effect with several reference works. Index words are recorded so that they are audible when the cassette is played in the fast-forward mode; when the desired entry is located, the reader stops the tape and resumes play at regular speed to hear the full entry for the key word. In the near future, it will be possible to produce dictionaries and similar reference tools in recorded formats, making them accessible for the first time to persons who must rely on this format.

Users of the NLS program are encouraged to patronize their local public, school, and college libraries for many of their information needs. Telephone reference service and community information and referral services are two traditional services that handicapped persons can take advantage of in their local areas.

The NLS program has always been quick to adopt new technologies with practical applications for library service to handicapped readers. Future advances in computer technology, telecommunications, and electronics can be expected to improve and expand information resources for handicapped readers, bringing them closer to the goal of full access to information available to all library users.

NOTES

1. An Act to Provide Books for the Adult Blind (Pratt-Smoot Act), March 3, 1931, chapter 400, section 1, *Statutes at Large* 46:1487. Hereafter cited as *Statutes*.
2. U.S., Congress, Library of Congress, *Report of the Librarian of Congress, 1932* (Washington: Government Printing Office, 1932), p. 275
3. P.L. 72-439, March 4, 1933, chap. 279, *Statutes* 47:1570.
4. P.L. 82-446, July 3, 1952, chap. 566, *Statutes* 66:326.
5. P.L. 89-522, July 30, 1966, §1, *Statutes* 80:330.
6. Rules and regulations relative to the loan of library materials for blind and physically handicapped people, are published in chapter VII, Title 36, §701.10, of the *Code of Federal Regulations* (1981); amendments are published in the *Federal Register*, most recently in vol. 46, no. 191 (October 2, 1981), p. 48661.
7. *Report of the Librarian of Congress, 1932*, p. 271.
8. *Division for the Blind and Physically Handicapped: A Survey of Reader Characteristics, Reading Interests, and Equipment Preferences; A Study of Circulation Systems in Selected Regional Libraries*, prepared by Nelson Associates, Inc., Washington, D.C., April 1969; *Readership Characteristics and Attitudes: Service to Blind and Physically Handicapped Users*, prepared by the Public Sector Research Group of Market Facts, Inc., Washington, D.C., September 30, 1981 (Washington, D.C.: National Library Service for the Blind and Physically Handicapped, 1981).
9. *A Survey to Determine the Extent of the Eligible Population Not Currently Being Served or Not Aware of the Programs of the Library of Congress, National Library Service for the Blind and Physically Handicapped*, prepared by the American Foundation for the Blind, New York, 1979, vol. 2, p. 57. Here after cited as the nonuser survey.
10. Nonuser survey 2:75.
11. Nonuser survey 2:77, Table A2-1.
12. *Book Reading and Library Usage: A Study of Habits and Perceptions*, conducted for the American Library Association by the Gallup Organization, Inc., Princeton, N.J., October 1978, p. 22.
13. *The Role of Libraries in America: A Report of a Survey*, conducted by the Gallup Organization, Inc., for the Chief Officers of State Library Agencies, Frankfort, Kentucky, 1976, p. 52.
14. U.S., Library of Congress, Division for the Blind and Physically Handicapped, *Selection Policy for Reading Material*.

15. *Book Reading*, p. 13.
16. P. 15.
17. *Readership Characteristics and Attitudes*, p. 3.29.
18. Nonuser survey 1:29.

Materials and Publishers

Mary Jack Wintle and Catherine Archer

In a complex, dynamic society, books, magazines, and a variety of other information and media resources are vital for an individual's knowledge of and perspective on the total environment. The reading needs of blind and physically handicapped people are no different from those of other citizens. Differences may exist in the formats of material, the breadth of choice, and the methods of dissemination, but the range of subjects covered and the uses for the materials are similar. Handicapped people who are unable to use regular print materials in the ordinary way have alternatives: one is a reading device, such as the Kurzweil or the Optacon; another is braille, disc, cassette, or large-print books.

The primary source of braille and recorded books for general reading, such as the informational and recreational texts found in print in a public library, is the Library of Congress program, funded by congressional appropriations. These books are housed, circulated, and supplemented to meet local needs by the network of libraries which cooperate in The Library's program; most of these network libraries are financed through state agencies.

Complementing these network materials are the transcriptions of educational, vocational, and religious materials provided by nonprofit agencies, community-service organizations, and church publishing houses. Generally, these groups, operating independently of the Library of Congress program, produce titles at the individual request of blind or physically handicapped students or professionals or for specific purposes, such as Sunday school lessons. In some areas around the country, radio transmittal of local newspapers and other reading materials provides still another information source.

Though the blind or handicapped reader may find variety in the special-format collections, the number of titles in any subject category

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is meager compared with the abundance enjoyed by those who can read regular print. For example, in 1979 while almost 40,000 commercial book titles rolled off the print presses,[1] an estimated total of 6,800 titles were produced in multiple copies in a format usable by blind and physically handicapped readers.[2] As compared with the publication of over 10,000 different print magazines,[3] there were about 390 braille, recorded, and large-print magazines provided for mass distribution.[4]

General Reading Materials

The National Library Service for the Blind and Physically Handicapped (NLS), Library of Congress, provides books and magazines in braille, cassette, and disc (rigid and flexible) editions. The supporting philosophy in selecting these materials is that blind and physically handicapped readers represent a cross section of the American people and that their reading tastes are similar to those of the general public. More specific information about the interests and needs of readers is gained from periodic surveys and from advisory committees.

The objective is to provide material on a wide variety of subjects and at different reading levels. Titles selected are similar to those found in an average public library and include classics and bestsellers; mysteries, westerns, and romances; travel guides and armchair travel books; works on history, music, ecology, and other timely topics; and self-help books on crafts, home maintenance, and other projects. The collection of mass-produced books available in all network libraries for children and adults presently consists of over 23,300 individual titles. Magazines are drawn from those popularly available in print and range from general to special interest.

To be considered for inclusion in the national program, current books must be well reviewed in national book-trade publications, library periodicals, and leading newspapers, or must appear on bestseller lists of national circulation. Final selection is made only after an examination of the print book. Further processing is conditional upon receipt of copyright permission from the author or publisher.

The high cost of producing braille and talking books in sufficient quantity generally limits the number of titles to those which will meet the widest reader preference. Table 5-1 shows the average number of titles and copies per title added annually to the national program in recent years.

TABLE 5–1
Annual Additions to NLS Collection, by Format

	Books		*Magazines*	
	No. of Titles	*Avg. No. Copies/Title*	*No. of Titles*	*Avg. No. Copies/Title*
Hard disc	350	925	3	750
Flexible disc	100	3,000	39	6,500
Cassette	1,200	800	3	500
Braille	300	80	35	8,000
Total	1,950		80	

When a title is selected for the program it is reproduced from cover to cover with no omissions except what is required by the format. Dust jacket information about the author and the book is also included. All editorial text in magazines is reproduced; advertisements are omitted to conform with the free mailing privilege regulations.

Most books and magazines are produced under contract according to NLS specifications. A few titles are purchased from sources in the United States and abroad, such as braille books from Royal National Institute for the Blind in England. The five principal braille presses engaged in mass-producing books and magazines under contract with the government are:

American Printing House for the Blind (APH)
Clovernook Printing House for the Blind (CPH)
National Braille Press (NBP)
Triformation Systems, Inc. (TSI)
Volunteer Services for the Blind (VSB)

Single-copy handtranscriptions of limited-interest materials made and reproduced in small quantities by volunteers around the country add to the breadth and depth of The Library's braille collection. It is through the efforts of volunteers—including those who produce recorded materials—that handicapped readers enjoy a wider choice of reading materials and the opportunity to have their specialized information needs met.

APH, the American Foundation for the Blind (AFB), and Eva-Tone, Evatype, Inc., a commercial firm, handle the complete manufacturing process for books and magazines on disc. Cassette books are narrated in studios at AFB, APH, and the Library of Congress, as well as at volunteer organizations which operate under stringent review procedures. Copies of these cassette books are duplicated and packaged by AFB, APH, and several commercial firms.

Quality control procedures at NLS include review of master tapes for recorded books and careful inspection of one copy of every braille and recorded title before the manufacturer ships the remaining copies to network libraries. The inspection routine includes not only recording quality or braille conformance, but also such physical features as labelling and binding. These inspections are conducted in addition to the quality assurance procedures required of every manufacturer.

Copies of most magazines provided by NLS are mailed directly from the producer to readers who have requested them. A few magazines—those on cassette or copies acquired in limited numbers from other publishers—are circulated to readers from the network libraries. Books are shipped from the manufacturers to the cooperating network libraries, where the books are housed when they are not being circulated to readers. This service is completely free to the borrower. There are no fees for postage and no charges for overdue, lost, or damaged books.

Newly released books and new program developments are announced in two bimonthly periodicals, *Talking Book Topics* and *Braille Book Review,* which are mailed free of charge to all blind and physically handicapped readers who borrow books from the regional libraries and to other interested individuals and organizations. Both magazines are available in large print; *Talking Book Topics* is also produced in a flexible disc edition and *Braille Book Review* in braille. In addition, biennial catalogs and subject bibliographies are compiled to assist patrons in making fuller use of the collections and are mailed directly to readers who request them on an annual order form sent to all patrons.

Network libraries receive quarterly cumulative editions of a catalog on microfiche of braille and recorded books in the program. The database is maintained in machine-readable form which is easily updated and edited. The catalog presently includes all titles mass-produced since the early 1960s and many titles produced by volunteers for the NLS collection. With the addition of titles produced by volunteers especially for network libraries, this bibliographic tool is being expanded into a union catalog.

Recorded Reading Materials

The recordings, called talking books, distributed in 1934 to blind persons were produced on 33 1/3-rpm hard discs approximately fourteen years before commercial long-playing records were available to the general public in the United States. An average book of twelve hours' listening time required twelve twelve-inch records. The burden of handling the heavy talking-book containers was lessened in 1962 with the introduction of 16 2/3 rpm and was further alleviated with the introduction of the present standard 8 1/3 rpm in 1969 for magazines and in 1973 for books. Each reduction in playing speed has also resulted in a lowered shelf space requirement per book copy and an approximate 25 percent savings in cost. (Some costs, such as studio recording and containers, were unaffected.) The savings have been

TABLE 5–2

Characteristics of Disc Formats

	Hard Disc			*Flexible Disc*
	33⅓ rpm	*16⅔ rpm*	*8⅓ rpm*	*8⅓ rpm*
Recording time/ side	up to 30 minutes	up to 45 minutes	up to 88 minutes	up to 60 minutes
Record size	12"	10"	10"	9"
Number of records for average book	12	8	4	6
Average weight in container	8.50 lb	5.25 lb	1.75 lb	.31 lb

used to produce additional copies of titles without concurrent budget increases.

Flexible discs made of 8-mil plastic were introduced into the program in 1968 for the bimonthly publication *Talking Book Topics*. Beginning in 1971 their use was gradually expanded to include the regular program magazines; two books were produced on an experimental basis the following year. Flexible discs have been well accepted by readers. For large quantities (i.e., three thousand copies) they are by far the most economical format.

Similarly, cassettes, have evolved from the commercial standard of 1 7/8-ips two-track, to 15/16-ips two-track, to the current 15/16 four-track format.

TABLE 5–3

Characteristics of Cassette Formats

	Cassettes		
	1 7/8 ips 2-track	*15/16 ips 2-track*	*15/16 ips 4-track*
Recording time/ track	up to 45 minutes	up to 88 minutes	up to 88 minutes
Number of cassettes for average book	8	4	2

In the future The Library's program will provide the majority of books on cassettes and most of its magazines on flexible discs. Bestsellers and other short-lived popular books will also be issued in flexible-disc editions to meet the immense initial demand. A few special-interest magazines with limited readership will be available on cassette.

Talking books—discs and cassettes—are used by 90 percent of the national network patrons; hard discs are the preferred medium of most people over sixty years old. This preference influences the format selected for most bestsellers and the proportion of light romance, historical fiction, and biography produced in these formats. Whether a particular work lends itself to oral presentation is also a factor to be considered: Does the text read smoothly with no dependence on pictures or graphs? If footnotes are present, can they be integrated without breaking the train of thought in the main body of the text? Can appendixes and indexes be narrated meaningfully? Recorded cookbooks and similar segmented texts present problems of access that may be resolved with the new word-indexing technique developed at NLS.

In the recording studio the content of a book must be considered in the selection of a narrator; for example, it would be distracting to listen to a woman with a New England accent narrating Jimmy Carter's autobiography or to a male news commentator narrating a Harlequin romance related in the first person by the heroine.

Titles from recent *New York Times* bestseller lists share the shelves with Zane Grey westerns, Agatha Christie mysteries, Isaac Asimov science fiction, the Bible (in various versions), *Robert's Rules of Order*, Thomas Mann's *Doctor Faustus*, and the Pulitzer Prize–winning book about the Chesapeake Bay, *Beautiful Swimmers*, by William W. Warner.

Network libraries add books and magazines of local interest to their individual collections to supplement the titles of broad national interest provided by the Library of Congress. These network additions are usually narrated by volunteers in their homes or in recording booths at the libraries. Other network libraries may borrow the books under interlibrary loan procedures.

The collection of about 14,800 recorded titles for adults, about 8,000 on discs and the balance on cassettes, is comprised of approximately 60 percent fiction and 40 percent nonfiction on disc and 40 percent fiction, 60 percent nonfiction on cassette.[5] Because five to ten years is the lifespan of disc recordings, some popular older titles in the collection are selected for reissue each year. These reissues and older titles not previously in the collection constitute about 50 percent of the annual selections. The rest are newly published works. The 45 or so magazines in recorded form include *American Heritage, Consumer Reports, Good Housekeeping, National Geographic* and *Sports Illustrated*.

Braille Materials

By around 1834 Louis Braille had developed an embossed six-dot system for writing the alphabet and numbers. This cleverly designed system with its compact cell is flexible enough to be used for music, math, and scientific notation and lends itself to the transcription of any written language. It did not, however, meet with instant acceptance.

Prior to Braille's invention there were other approaches to embossed printing. Raised impressions of print letters were made by a series of closely spaced dots or solid lines; the popularity of a greatly modified version—Moon type—continued into the twentieth century and has only recently declined. For many years a number of dot systems, including braille (three dots high and two dots wide), the Barbier code (six dots high and two dots wide), and another known as New York point (two dots high and one to four dots wide), competed for adoption as the standard reading medium. Production of materials in these different systems reduced the already limited number of titles available to blind readers and invariably meant duplication of effort among the producers. Finally, in 1918 the United States adopted Revised Braille Grade 1 1/2 (a slightly contracted form), and in 1932 Standard English Braille became the common system throughout the English-speaking world. This coincided with the national braille library program for adult blind readers established at the Library of Congress by an act of Congress in 1931.

For braille production in the United States now, the official guide is the *Standard English Braille, American Edition* (grade 2 system, which consists of almost 200 contractions and words written in abbreviated form). Books produced by braille presses are interpointed (i.e., embossed on both sides of the page). Volunteer-produced books with braille on only one side of the page require twice as many volumes and thus twice as much shelf space. Even interpointed braille is bulky. An average press-braille book consists of three volumes and occupies a space 12" high by 12" deep by 7½" wide. Production costs are high and climbing. Present research and testing efforts are exploring alternatives to reduce production costs and decrease the time involved in getting a book to a reader. Both braille produced from machine-readable tapes used in composition of print books and braille reading machines which store material electronically on standard cassettes are being evaluated.

The typical braille reader is forty years old, college-educated, employed, and more critical than the average talking-book reader. These characteristics naturally influence the books selected for the braille collection as does the braille format: it is more like the print-book format than recordings are and lends itself, for example, to skimming forward and back, to reading directions or checking specific references, and to raised-line representations of graphs.

The collection of about 3,550 press-braille adult titles produced for NLS consists of about 50 percent fiction and 50 percent nonfiction.[6] It is supplemented by an estimated additional 12,000 titles (listed in the microfiche catalog) which have been handtranscribed by volunteers using a brailler (a manual typewriterlike machine with six keys which correlate to the six-dot braille cell) or a slate and stylus (a hinged metal form and round-tipped punch). Volunteers also produce braille transcriptions for network libraries and other agencies as well as for individuals.

Titles of popular and recreational interest (e.g., adventure, historical fiction and suspense) are included in the braille collection along with instructional texts, such as *McCall's Needlework and Crafts* and *Modern Chess Openings*, and informational texts, such as *Consumer Survival Kit* and *Access National Parks: A Guide for Handicapped Visitors*. Braille magazines provided in the national program include *Better Homes and Gardens*, *Family Health*, *Fortune*, and *Science Digest*.

Large-Type Materials

Reading materials in large type are produced by commercial publishers in typeset or photographically enlarged editions and by volunteers on specially adapted typewriters. For transmittal under the free-matter provision of the postal law, 14-point type is considered the minimum size for large type. These materials are most effectively used when printed in bold, simple type and on contrasting nonglare paper, for example, black ink on white paper. Wide spacing between lines also improves readability.

The commercial market for large type is gradually expanding. The 1970 edition of *Large Type Books in Print* included 1,200 entries from about thirty publishers. By contrast the 1976 edition included

2,552 entries from forty-four publishers, the 1978 edition 3,380 entries from about seventy publishers, and the 1980 edition over 4,000 entries.

Though bookstores rarely have large-type materials in stock, they are available on loan from public libraries or to eligible borrowers through one of the NLS network libraries. Titles range from the *New York Times Large Type Cookbook* (one volume, 18-point type), to *Webster's New Collegiate Dictionary* (nine volumes, 14-point type), to adult and juvenile classics such as *The Art of Loving* by Erich Fromm and *Charlotte's Web* by E.B. White (both in 18-point type). *Reader's Digest* and a variety of other magazines are also available in large type.

While its general collection does not contain large-type materials, NLS produces its client-oriented publications in large type and some of its music scores are photographically enlarged. NLS also produces a reference circular with detailed information about sources of large-print materials, including publishers' names and addresses.

Children's Reading Materials

Congress passed legislation extending the national library service to blind children in 1952. Since then NLS has produced about 3,760 children's books in recorded formats and 1,115 in press braille. And about 2,700 handcopied braille titles have been added. Children's magazines and a wide range of music instruction materials are also available through the program.

NLS produces approximately four hundred children's books each year. This number includes all the books selected for children from preschool through junior high school. The high cost of producing braille and recorded titles limits selection to those books expected to be very popular. To supplement the NLS collection, volunteer groups and other agencies across the country braille and record books for which there may be less demand.

The children's collection runs the gamut from picture books for preschoolers to current fiction and timely nonfiction for junior high readers. There is one crucial consideration in selecting children's books for transcription and recording. Illustrations are an integral feature of many children's books. To be effectively brailled or recorded, however, the text of a book must convey its spirit without relying on illustrations. While books for older children generally lend themselves to transcription or narration, picture books often lose their punch, and sometimes their meaning, without illustrations. For this reason, picture books are scrutinized page by page during the selection process.

The unique reading needs of very young children have prompted the development of several special formats. One of the most popular is PRINT/BRAILLE, which combines the complete print book with the accompanying braille text embossed on clear acetate interleaves. These books allow blind adults and sighted children or sighted adults and blind children to share the reading experience. As a boon to partially sighted readers, many of the PRINT/BRAILLE books feature large-print text.

Stimulation of all the senses assumes great importance in the development of disabled children because they often have a more limited acquaintance with the world around them than their nondisabled peers. The NLS collection includes a number of books with features designed to tickle the fancy and sharpen the senses. The "Scratch 'n Sniff" books intrigue both children and parents with fragrance strips that release scents related to each story. For the sense of touch there are stories that feature special tactile inserts, such as *Pat the Bunny* by Kundhardt.

In response to requests from parents, teachers, and librarians, NLS produces a number of books for young children in both PRINT/BRAILLE and disc formats. The duplication allows readers to borrow the two formats simultaneously, giving access to three media at once—print, braille, and sound. Many of the braille and recorded books available through NLS can be found in print on the shelves of school and public libraries. A large number have been published in relatively inexpensive paperback print editions. For children who benefit from hearing and seeing a book at the same time, adults can combine the recorded edition with a print copy to enhance comprehension and enjoyment.

Older children, who have a wider range of interests, abilities, and experiences, demand diverse reading materials. Fiction for the middle grades includes mysteries, humor, family stories, animal stories, and science fiction. Nonfiction includes folk and fairy tales, poetry, Bible stories, science, biographies, history, and sports. Recorded books for children from fourth grade through junior high are produced on cassette.

NLS offers an extensive magazine program to augment the book collection. Children's magazines offered on disc during 1981 included *Ranger Rick's Nature Magazine, Jack and Jill,* and *National Geographic World*. Braille magazines for children included *Jack and Jill, Boys' Life, Seventeen, Children's Digest,* and *Teen*.

To interest young readers in the program, network librarians offer a variety of activities, including story hours, book talks, and summer reading clubs. For example, during the heyday of television's "Six Million Dollar Man," the New Hampshire regional library invited all young readers to apply for a summer position as Bionic Secret Agent. Each applicant was assigned an alphanumeric agent number and a contact date and time. At the appointed time, the program coordinator, known only as Mission Chief L, contacted each agent with an assignment—to read and discuss three books during the summer. The secret agents who completed their assignments received wallet-sized certificates. Lindsay Wagner, who played Jamie Summers in the series, signed the girls' cards. Lee Majors, the bionic man, signed the cards for the boys who participated. Staff and readers alike found the spirit and glamor of the program contagious.

Commercial sources offer a wealth of recorded material to complement the free recordings from the NLS network and other agencies. Many of these recordings are packaged in appealing multimedia kits such as discs or cassettes accompanied by books. Nearly fifty producers of children's recordings available for purchase are listed in the NLS reference circular entitled *Subject Guide to Spoken Word Recordings*.

The marketplace offers an abundance of large-type books for partially sighted children. The 1980 edition of *Large Type Books in Print* lists more than three hundred children's books in 14-point type or larger. Each entry indicates author, title, publisher and date of publication, type size, and grade level with the grades spanning preschool through junior high school.

To facilitate library use by partially sighted youngsters, the North Carolina State Library compiled a selective list of books published from the 1930s through 1977 in 16-point or larger type. Critical annotations evaluate style and size of type, spacing, contrast, and illustrations of approximately four hundred books for children from preschool through fourth grade.[7] Many of the titles, especially the older ones, are widely available in the children's sections of public libraries.

Network librarians have increased readership significantly through intensive outreach campaigns. One librarian visited, over a two-year period, every school principal and classroom teacher in her service area. Because neither principals nor teachers were familiar with the program, the librarian began with the basics. She asked specifically about students whose eyes wander, squint, or show frequent redness and watering; she asked about students who hold books and papers very close to their eyes. And she asked about students in wheelchairs. Once the principals and teachers understood the criteria, they identified many eligible children who were then enrolled for service. The very fact of having their disability acknowledged and diagnosed correctly empowered a number of these children to read even though parents and teachers had given up on them.

Services for Students and Professionals

NLS is known to the general public as the national source of braille and recorded books for visually and physically impaired readers. In addition to books and magazines, NLS and cooperating network libraries offer a wealth of other publications and services for students and professionals relating to handicaps and library services for handicapped people.

The NLS Reference Section maintains a comprehensive library of material on blindness and other disabilities. Each year reference librarians respond by letter and phone to more than twenty thousand inquiries from around the country. The requests are researched in a reference collection of monographs, periodicals, directories, bibliographies, brochures, and articles on all aspects of visual and physical conditions that affect reading. In addition, the reference staff may search the Library of Congress databases and two commercial databases, BRS (Bibliographic Retrieval Services) and DIALOG, to satisfy requests.

The Reference Section creates and updates many reference circulars of special interest to students and professionals. Most of the publications are produced in braille or recorded form as well as large print. Indispensable to active readers is the directory *Volunteers Who Produce Books,* a national listing by state and city of the volunteer groups and individuals who transcribe and record books and other material. Additional publications include the following:

National Organizations Concerned with Visually and Physically Handicapped Persons
Magazines in Special Media
Reading Materials in Large Type
Subject Guide to Spoken Word Recordings
Attitudes Toward Handicapped People (bibliography)
Reading, Writing, and Other Communication Aids for Visually and Physically Handicapped Persons

The NLS Consumer Relations Section, which maintains an active liaison with users, serves as a clearinghouse for government documents in special media. NLS does not house or store any documents; staff members simply refer inquirers to the agency that actually publishes and distributes the material.

While NLS and the cooperating network libraries provide books and magazines for general reading, many other independent agencies provide the textbooks essential to students from preschool to graduate school.

The American Printing House for the Blind (APH) is the world's largest publishing house for the blind. Since 1879 APH has been the official national textbook printery for blind students from preschool through high school. APH publishes in four media—braille, large type, disc, and cassette. It also publishes a catalog advertising such special items as braille and large-print flash cards, braille typewriters, sound-matching games, relief globes, wooden erector sets, textured alphabet letters, and other educational games.

In addition to manufacturing books and learning aids, APH also maintains the Central Catalog of Volunteer-Produced Books. This catalog identifies and locates more than eighty thousand books produced by the many volunteer groups around the country in braille, large-type, and recorded form. Compiled annually, the catalog is available in book form to large institutions concerned with the visually handicapped.

Recording for the Blind (RFB), a nonprofit voluntary organization, lends recorded academic texts at no cost to eligible readers. RFB serves elementary school, high school, undergraduate and graduate students, and professionals. The RFB library offers more than sixty thousand titles, with new books added at the rate of five thousand per year. RFB cassettes may be played on both the Library of Congress playback machine and a cassette player-recorder sold by the American Printing House for the Blind. RFB issues an annual cumulative catalog of titles.

The Braille Book Bank of the National Braille Association (NBA) produces Thermoform copies of hand-transcribed textbooks for blind college students and professionals at approximately the cost of the print book. A dedicated national corps of volunteer transcribers makes this service possible.

A unique service of NBA is the Reader-Transcriber Registry which matches blind readers with volunteers willing to transcribe for individuals.

The Hadley School for the Blind in Winnetka, Illinois, offers free correspondence courses in both braille and recorded form to blind and deaf-blind children and adults. Accredited academic courses of study range from fifth grade to college level. Hadley has also developed correspondence courses in Bible study and a number of vocational and avocational subjects.

Volunteer Services for the Blind (VSB) offers an array of services for blind students and business and professional people. VSB is equipped to produce reading matter on request in braille, disc, and tape formats. The braille services range from volunteer-produced handcopied braille to press braille and computer-produced braille. While volunteers donate their time for transcription and recording, there is a charge for materials and computer time.

The Student Division of the National Federation of the Blind (NFB) publishes the *Handbook for Blind College Students,* a practical guide based on the collective experience of student members of NFB. It suggests a variety of ways to use the academic library and the rehabilitation and other services available to blind students nationwide. Appended are lists of braille presses and print-book enlargement agencies.

The American Foundation for the Blind (AFB) provides a wide variety of programs and services for visually impaired patrons, the general public, and the professional. The foundation publishes a comprehensive catalog of more than four hundred aids and appliances for people with vision problems. AFB responds annually to more than fifty thousand requests for information from the general public, professionals, and visually impaired people and their families. The Migel Memorial Library, named in honor of AFB's first president, contains one of the world's largest print collections on blindness. Its staff and services are available to anyone seeking information about blindness.

AFB also sponsors many publications, ranging from one-page flyers to technical research monographs, handbooks, curriculum guides, newsletters, and bibliographies. One of AFB's longest-lived publications, in its twenty-first edition in 1981, is the *Directory of Agencies Serving the Visually Handicapped in the U.S.* This inclusive guide, frequently updated, provides current information on five hundred federal, public, and private agencies offering direct services to blind and visually handicapped persons.

Music Services

NLS provides an extensive collection of music scores, textbooks, and instructional materials in braille, large print, and on disc and cassette recordings. This special music library was created by federal law in 1962 as part of the Library of Congress free national library program of braille and recorded books and magazines. Although the general reading program is administered by NLS through the nationwide network of cooperating libraries, music patrons deal directly with NLS.

The NLS music collection, made up of about thirty thousand titles, contains braille music scores and braille books about music; large-print music scores and books about music; and recorded self-instructional courses, books, lectures, demonstrations, and other educational materials.

Braille music is the largest segment of the collection and includes music which is standard repertoire for most instruments, librettos of operas, vocal and choral music, and some popular music. Braille music books include specialized music texts and other music-related works. For example, the collection includes texts used for college-level courses in music history, harmony and theory, sightsinging, orchestration, form and analysis, and counterpoint.

Large-print scores, books, and a magazine are available for the partially sighted person. Type size is a minimum of 14 point and staff size is one inch. This collection emphasizes beginning method books and easy pieces for playing and singing.

NLS provides discs and cassettes containing subjects including music theory, appreciation, and history; biographical sketches of musicians with examples of their art; interviews and master classes with well-known musicians; instruction for voice and various instruments; and music magazines. Musical recordings intended solely for listening are not part of the collection.

Several music periodicals in special formats are available upon request to the Music Section. The *Musical Mainstream* is an NLS publication intended for the serious musician and educator. Published bimonthly in braille, cassette, and large-print formats, it includes reprints of articles about classical music, criticism, and instruction. Three other digests, *Contemporary Sound Track, Braille Musical Magazine,* and *Overtones,* are available in special formats and, in addition, complete issues of *Stereo Review* and the *Music Journal* can be obtained on flexible disc. Other publications include the *Music Article Guide,* a commercial index of articles from selected U.S. magazines, reproduced quarterly in braille and on cassette. The articles listed in the index are recorded or brailled upon request by patrons. NLS also publishes a catalog series, Music and Musicians, listing materials in its collection by performing medium or format. Each catalog is available in large print and the format of the material listed, that is, braille, disc, or cassette.

Reference assistance in all areas of music is provided to blind or physically handicapped individuals. Information is also available to teachers, students, and others working with handicapped musicians.

Foreign-Language Materials

NLS is building a substantial foreign-language collection through an active exchange program with other countries and through original selections and transcriptions. This collection offers selective coverage of titles in foreign languages, based on the relative size of the language group in the overall clientele. The initial emphasis of the NLS collection has been on Spanish-language materials, ranging from Latin American classics to translations of bestsellers and other popular titles published in the United States. In addition, two monthly Spanish-language magazines are produced on flexible discs and sent directly to readers who request them: *Buenhogar* (Good Housekeeping) and *Selecciones del "Reader's Digest."* A German-language magazine, *Das Beste aus "Reader's Digest,"* is also available on flexible disc through the NLS program.

While NLS develops a core collection of universal interest, the network libraries through local recording programs are producing titles of local interest. NLS acts as a copyright clearing house, bibliographic control center, and interlibrary loan facilitator for all foreign-language materials produced in the network.

Recording for the Blind produces textbooks and literary works in foreign languages in response to student requests. In addition, foreign-language recordings are available through commercial sources.

Religious Materials

Standard works relating to the world's major religions are provided by NLS in proportion to demand. Among the sacred writings included are the Koran, the Torah, and the Catholic, Jewish, and Protestant versions of the Bible. Titles of general interest about religion also can be obtained from network libraries. For example, such titles as G. Ernest Wright's *Biblical Archeology,* Norman Vincent Peale's *Healing of Sorrow,* Thomas a Kempis's *Imitation of Christ,* and Doris Faber's book about the Shakers in America, *The Perfect Life,* are available.

An NLS reference circular lists other sources, publications, and costs. The listing includes versions of the Bible, the Book of Mormon, the Bhagavad Gita, and other scriptural works which can be purchased and sources for hymnbooks, Bible study guides, and other sectarian materials.

Some of the major denominations also provide lending libraries specifically for blind and physically handicapped members; these include the Episcopal Guild for the Blind, the Christian Record Braille Foundation, the Jewish Braille Institute of America, the Lutheran Library for the Blind, and the Xavier Society for the Blind. Bible commentaries, histories, theology, and other nonsectarian material on religions of the world will be recorded on demand by Recording for the Blind.

Radio Reading Service

A network of autonomous radio information services has developed around the country. Most of these services use a public radio FM subchannel (SCA) to broadcast current and local information to blind and physically handicapped people in their communities. Specially tuned receivers separate the SCA signal from that of the main channel. Some of the services transmit on the main channel of an AM or FM station.

The first radio reading service was established in 1969 by C. Stanley Potter, the director of Services to the Blind and Visually Handicapped in Minnesota. Today there are eighty-five stations in the United States and Canada.

The purpose of radio reading services was succinctly stated by Florence Grannis, former assistant director of Library and Social Services, Iowa Commission for the Blind:

> *What* should radio reading for the blind be? . . . it should be a vehicle for supplying the newspaper to the blind and physically handicapped in the community who do not have the capacity to read it directly. What else it should be is variable depending on the resources, needs, and creativity of the community and the sponsors of radio reading. Overwhelmingly, the emphasis should be on material not otherwise readily available to this audience, and the stress, also, should be on immediacy. . . .
>
> What should it not be? It should not be a substitute for improving the library for the blind and physically handicapped; a means of broadcasting Library of Congress

provided, recorded books; a duplication of materials available elsewhere on the air. It should not be patronizing and demeaning; inferior in quality.[8]

Radio Reading Services for the Blind and Other Handicapped Persons was incorporated in 1977. Its purpose is to encourage the establishment and operation of reading services and to share technical, fiscal, consumer relations, and program information.

NOTES

1. *Bowker Annual of Library and Book Trade Information*, 25th ed. (New York: R. R. Bowker Co., 1980), pp. 446–451.
2. Derived from an informal survey of major producers in 1981.
3. *'81 Ayer Directory of Publications* (Philadelphia: Ayer Press, 1981), p. viii.
4. U.S., Library of Congress, National Library Service for the Blind and Physically Handicapped, *Magazines in Special Media*, Reference Circular, no. 81–3, August 1981.
5. Bibliographic Retrieval Service (BRS) search, September 1981.
6. Ibid.
7. North Carolina, State Library, Department of Cultural Resources, *Books for Visually Impaired Young Children: An Annotated Bibliography*, compiled by Beverley Simmons (Raleigh, 1978).
8. Florence Grannis, "Radio Reading Presents the Newspaper: One More Channel to First-Class Status," *Illinois Libraries* 57:467 (September 1975).

Reading Aids and Devices

Leslie L. Clark

"Libraries exist to acquire, store and retrieve information that has been recorded. . . . The forms of recorded knowledge range from characters inscribed on clay tablets, handwritten manuscripts, print sheets and volumes, and a wide range of audio-visual materials to encoded data on machine-readable computer tapes and discs."[1] Reading this preserved knowledge can be defined as a directed perceptual task usually involving interpretation of an encoded representation of oral language, which is both primary and ephemeral. The dominance of type is such that people tend to think of reading in terms of sight reading of print books or magazines, but, with respect to libraries, reading in its widest meaning refers to interpreting information stored so as to make possible public access to it at a relatively low cost (as compared, say, to finding an expert in a given area to talk to).

The predominant method of reading involves gaze not merely vision, hence the use of the term *directed* above. Vision can be thought of as a perceptual experience stemming from an unwilled detection of the world, through signals transmitted in the visual pathway (eye, optic nerve, visual center in the brain) whenever the eyes are open and the individual is awake. But gaze involves more than vision. While vision depends on feedback mechanisms to steady the image in the eye through control of eye muscles and confirms what is seen through comparison with past experience, gaze adds other elements to the visual process. Among them is the state of attending to what is seen and the important addition of feed-forward. That is, gaze involves a silent process in the brain of expectancy or anticipatory recognition of what is seen, driven by a conscious desire to interpret. It is gaze and not vision that is involved in sight reading, just as it is listening and not merely hearing that is involved in aural reading.

Ordinarily, as much information about the world is received

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through the visual channel as through all of the other senses combined. Although experts may differ in the exact percentages involved, it is safe to say that well over half of what people know of the world they inhabit they know through vision; estimates nearer the 90 percent mark are probably more nearly correct.

The impairment of vision can be measured. The usual measures are concerned with acuity at near (reading) and far (or distant) points, size of the visual field, field losses, and the like. A common and easily remembered measure is the ability to read headlines in the daily newspaper with best correction in at least one eye; this helps to define the boundary beyond which it is said that severe visual impairment exists. (A similar functional measure for distance vision is the ability to recognize the face of a friend from across the street.) Physical impairment can also be measured. One can specify with fair precision the inability of a person to move hand, arm, or elbow past a certain point; to hold a weight for a given time; or to support that weight against some holding device for a given period of time.

The disability that results from impairment can also be measured. It can be defined as the difference in the ability to perform a task as compared to the performance of an unimpaired person. A print reading disability may thus result from a visual impairment or a physical impairment: in the one case, an inability to appreciate standard printed text visually; in the other case, an inability to lift or hold a book or to turn pages.

A handicap may be said to exist in the domain of library services if an impaired person is hampered in reading library materials as a result of his or her disability. If physically impaired persons cannot gain access to a library because of their disability, they have been handicapped. Or if librarians perceive visually impaired people as having characteristics not intrinsic to their disabilities, those individuals are handicapped by the attitudes of others. On occasion, the net result is ludicrous, as in the case of addressing remarks to a blind person through his or her companion instead of speaking directly to the blind person. (By the same token, the librarians' attitude is an impairment which limits their functioning successfully, that is, disables them, in providing services to impaired people and may handicap them in their careers.) The process of imposing a handicap on impaired people may be completed by their acceptance of the validity of illogical prejudgments (that is, prejudices) about their ability to perform tasks.

The job of assisting in the relief of the disability that visual or physical impairment imposes in the task of reading ordinary books or magazines differs somewhat, depending on the impairment. In the case of visually but not otherwise impaired readers, it is necessary to make up a deficit in the information accessible to them because the primary reading input through the visual channel is deficient or missing. In the case of physically impaired readers, the enormous capacity of the visual channel to absorb information is intact, but the ability to manipulate the form in which text is usually presented is deficient. These cases are different enough that we shall treat them separately. In keeping with the greater loss of information input in the case of visual impairment, the major part of this discussion will concern making up information transfer for blind and visually impaired readers. We shall then touch on the problems of those who are physically impaired.

Reading and Visually Impaired People

A few remarks on the demography of the visually impaired population may be useful. The size of a reading public may help determine the scope of the librarian's task. It also impacts on the degree to which institutional response may be made to the population and the degree to which technological development will be pursued when constraints on funds to develop systems and the time and energy to deploy them must be considered.

There have been a number of attempts to assay the size of the market for products for blind and visually impaired people. All rest on partial information, and the best one can say is that any estimate of the population involved is apt to have quite large errors associated with it: these errors may well approach plus or minus 40 percent. Thus, we can estimate that there are approximately a half-million persons in the United States who are totally blind (have no light perception), have light perception (can tell whether light is present or absent), or have some light projection (are able to identify the direction from which light is coming). There is a much larger population of persons whose visual impairment shades away from this end point toward normal vision; a reasonable estimate is that some nearly two million persons suffer visual impairment sufficient to meet the informal functional criteria of impairment already noted: inability to read headlines in a newspaper and to recognize familiar faces from across the street. This is the population, in total, that is usually understood to be blind and visually impaired. There may be perhaps an additional three million people whose visual impairment interferes to some degree with the smooth accomplishment of everyday tasks at work, study, and leisure—most of which can be corrected with relatively simple lenses, spectacles, or contact lenses.

It may also be useful to keep in mind that the proportion of readers in this population probably does not exceed that to be found among the unimpaired population—defining *reader* as a person who has "read at least one book either in whole or in part during the previous month."[2] That number has been variously estimated at between 5 and 10 percent of the unimpaired population, with the probable number lying nearer the lower figure.

Approaches to Overcoming the Visual Disability

Given the primacy of print, the reading disability of blind and visually impaired people results in an information deficit. Thus the task is to utilize information input opportunities through the recruitment of what is left of the visual sense or through the other senses. There appears to be much anecdotal, and some research-based, support for the notion that individuals differ in their preference for auditory versus tactual presentation of information.

To overcome the disability resulting from visual impairment or blindness, there are two principal means of accessing the standard printed word. One is by direct access; the other is through indirect access. This distinction emphasizes whether readers can access without limitation any standard print source available in their reading environment, even if they use a device or machine to do so. If they can, then they have direct access to the standard print page. If another human being is involved in the process, as in the case of the talking book or braille materials, then the reader is said to have indirect access to the print page. In the past, indirect access was cheaper when the scope of literature involved was constrained. The decrease in costs of advanced technology may make some forms of direct access to an essentially unlimited standard print library cheaper when the cost of devices incorporating the technology is amortized over their useful life. Examples of such devices are given below.

Whatever the impairment or disability in reading, it may be well to state the obvious, namely, that making the task easier by providing comfortable conditions will enhance reading performance. This may be a precondition for reading for entertainment and recreation; and, although motivation will carry the reader through when reading for work or study, less overall effort will be required when the work-oriented reader is comfortable. Tables and chairs arranged at heights suitable for the equipment used, if any (see below), the provision of cushions, and a quiet ambiance all allow best reading performance and concentration. Lighting may also be crucial. A recent report in a German medical journal confirms once again, as have many reports in the past, that improvements in illumination reduce the restriction on the reading task imposed by visual impairment; these researchers claimed that improvements in electric lighting could result in a sharp reduction of visual disability in reading, from 520 to 300 cases per 100,000 adults in their study.[3]

Direct Access Devices

Optical Low-Vision Aids. Readers with low vision are characterized by reduced near visual acuity, perceptual field defects, or both. Most attention has been focused, therefore, on enlarging the print image by optical or electronic means. Low-vision readers usually take the first step on their own, in the sense that managing their visual loss means using traditional spectacles until these are no longer adequate. A vast array of lenses from stock is available from U.S. and European manufacturers with which eyeglass providers can aid the person with impaired vision, ranging from the need for reading lenses with slight magnification (and/or other corrections) up to fairly strong lenses. Beyond this point, lenses may be custom-matched to an individual's particular visual impairment, usually in low-vision clinics. Suitably motivated individuals may achieve impressive results even when there are serious field restrictions: in one case reported to the author by a

New England optometrist, a young woman was able within a few weeks to read 600 characters a minute through lenses with a magnification of twenty times in a one-degree visual field.

In some cases, an external magnifier that is hand-held or mounted in a stand, fitted optionally with a source of illumination, is enough to make reading standard print routinely possible. Production-line quality control lens viewing systems, such as Masterlens, containing their own illumination source, can be used; the advantage is that the magnifier is large—some four by eight inches—and covers nearly a whole page at once. Hand-held or stand-mounted magnifiers of 2X to 4X power, some fitted with batteries and a high-intensity bulb, are available.[4] Prices range from $4 to $30 for the simpler devices to $300 and over for industrial grade devices.

Electronic Low-Vision Aids. When greater magnification is required, electronic aids can provide it. In the United States, systems employing small television cameras and display monitors are known as closed-circuit television systems (CCTVs); but the present purpose is better served by the European designation, namely, television magnifiers. The magnification range is generally from six to forty-five times, with the region of highest quality display in the lower half of this range. Variable magnification is achieved by using zoom lenses like those now popular among 35-mm camera enthusiasts. These lenses are mounted on compact television cameras that are, in turn, mounted on upright columns fitted to a copy board. The copy board, which holds the text, is often supplied with a so-called X/Y table allowing free movement in the left/right and up/down directions below the stationary lens. The text detected by the lens is displayed on a television monitor, essentially a television screen without the tuner used to bring in standard channels. The standard display is that of black characters on a white background. Some readers find that this introduces glare into their field of view. For that reason, most television magnifiers are equipped with an image reversal, or positive/negative, switch allowing display of white text on a black background. Prices range from about $1,000 to $3,000. Adaptations to read computer terminal screens are also available.[5]

Many different models of television magnifiers are available, from library-based and relatively large systems to suitcase-size portable units.[6] There are at present no national standards applicable to television magnifiers for the visually impaired reader. Rather, industry standards for qualities such as resolution, brightness of screen image, and image magnification range prevail; and the marketplace operates to preserve those manufacturers making units users find acceptable.

With respect to all low-vision aids, it may be useful to keep in mind that there is one issue in the field that may impact on reader interest and ability to read—that of training to criteria in performance with an optical aid, especially for those people using powerful optical aids for the first time. Perhaps the best developed form of this training can be found in Norway, where the Hjaelmiddlesentralen, or sensory aids center, is a focus for a series of links to the medical, educational, and rehabilitation systems, and the individual consumer is tracked through his home, work, and leisure environments until both he and the center counsellor are satisfied that he performs as well as possible with the aid. The other extreme is found in one experimental program in Britain, in which the individual is fitted with an optical aid, given about an hour's instruction and experience with the aid, and urged to go out and use the aid in all his normal environments. Curiously enough, both systems appear to work, which may only be another way of saying that there is not sufficient data to say that one scheme works better than the other, or that criteria of performance that are optimally relevant to the task to be measured have not yet been identified.

Large Print. Discussion so far has focused on devices and systems that allow unrestricted access to standard-print library collections. Books in which the type has been made large in the production process are, essentially, preprocessed to provide a larger image for the impaired eye to detect. (Books can be produced in large and standard-size type simultaneously. Those that are reprinted at a later date in large type may be considered quasi direct-access aids, inasmuch as human intervention is necessary between the original standard-print edition and the reprint accessible to those who are visually impaired.) Curiously, large-print books have never enjoyed a wide audience of users. One can only suspect that for those used to handling ordinary print texts, large-print books seem expensive, unwieldy in size, and relatively limited in availability of titles.[7]

Print-to-Raised-Character and Print-to-Speech Devices. The Optacon Reading Machine is a sophisticated embodiment of advanced technology and fabrication techniques that provides direct access to print materials. Developed jointly by John Linville, chairman of the Department of Electrical Engineering of Stanford University, and James C. Bliss, of the Stanford Research Institute and, later, president of Telesensory Systems, Inc., in Palo Alto, the device is a battery-powered, book-sized unit containing a vibrotactile display and a reading probe or wand connected by a thin wire to the display unit. The probe is drawn across a line of print text—freehand or with the help of a guide rod. An array of light-sensitive cells detects the shape of the print character, and electrical impulses corresponding to the detection are sent to the display unit. There, the signals are used to activate a drive unit in which electrical impulses cause a crystal to vibrate—just the reverse of the way in which the older crystal pickup worked in an inexpensive 1950s phonograph unit. The vibrations are conveyed by a series of bars which change the direction of vibration into the vertical axis in a pin array containing an enlarged reproduction of one full character and half of each of the preceding and following characters of the print text. The effect is to present a vibratory stimulation to the finger that emulates the visual display of a traveling news sign on a building. Although the device is relatively expensive—about $5,000—many readers regard it as an investment in independence. The most enthusiastic users may well be those whose primary perceptual alternative to vision is the tactual mode. About 150 hours of training result in modest reading speeds of some ten to twenty words per minute. However, it is interesting to speculate, along with Dr. Bliss, on the effect of years of practice in appreciating such tactual stimulation representing ordered information. Were one to begin using an Optacon at the same time as children begin typically to learn to read print, then with twelve years or so of constant rehearsal of this skill, reading speeds with a tactual display might be of a much higher order of magnitude—perhaps ten times greater or more.

Under development is an accessory for the Optacon which will yield a synthetic speech output as an alternative to the tactual display. The synthetic speech signals that will drive the audio output unit on the attachment are based on the most advanced techniques developed by the renowned speech laboratory at the Massachusetts Institute of

Technology. No firm release date has been given for the speech output unit; it has been expected for the last two years.[8]

The Kurzweil Reading Machine, a very advanced synthetic-speech-output reading device, was born from MIT research as well, in a small company financed by the friends and family of Raymond Kurzweil, a gifted graduate of the Institute. The company has been purchased recently by Xerox Corporation. There are several models of the Kurzweil Reading Machine; all operate similarly. A book or other text is placed on a transparent plate where the characters are scanned by an optical imaging system. A proprietary image-analysis system detects the features of the print characters and causes a search of phonemic memory equivalents of the characters. When found, the phonemic equivalents are used to drive another computer program to generate synthetic speech in a manner similar to that of the Optacon speech-output accessory described above. The major software (computer programming) in the Kurzweil is contained in easily replaced special cassettes; thus the constant improvements introduced for more accurate detection of print characters, better shaping of the speech sounds of the output, the introduction of natural-sounding pauses and inflection—all these can be introduced into up-dated cassettes which, when inserted into any previously made machine, bring its performance up to date. The device, which originally cost more than $50,000, has been reduced in price by more than half as the computer chips with which it operates have declined in cost per unit of memory. The original goal of achieving a $5,000 cost for a model that could be owned by individuals has not yet been met.

The synthetic speech sounds vaguely foreign to most listeners—Scandinavian to some—but it has been found that, with exposure to the device for an hour or so, many listeners have little trouble understanding it more or less completely. This reading device is certainly no substitute in entertainment value for a well-narrated talking book; but it is intended rather for the reader of reference or technical material or of books that have not yet found their way into talking-book form. The synthetic speech display can be thought of as matched to that preference for auditory mode characteristic of part of the visually impaired and blind population. The question of comprehension in long-term listening to synthetic speech output has not been settled. Some listeners appear to have little trouble; others seem to undergo a quite characteristic decline in retention, though not immediate comprehension, over long listening periods. It is thought by some researchers that the constant full loading of the short-term auditory memory store may tend to cause errors in perception to accumulate over long listening periods. Nevertheless, for the primary use for which it is intended, the synthetic-speech-output reading machine is the realization of a demand made by the blind community for several decades; and it is a brilliant technical achievement.

But the utility of the Kurzweil system has not yet been exhausted. A recent development is an obvious extension of the character recognition capability of the device: if the print characters can be recognized, why not then use this information to drive automatically a print-to-braille translation program and extract braille instead of speech at the output? This has been done and, although the system must still be counted as experimental, it is being evaluated carefully for its potential by the Library of Congress and by independent researchers.[9]

An essentially similar system of character recognition of print text and conversion-to-braille output, with a continuous display of the braille equivalent, all housed in a desk-sized unit, was announced as under development in Israel several years ago. Its current status is not clear.

Text-to-synthetic-speech and spelled-speech equivalents have also been developed in Canada. Dr. Michael P. Beddoes, of the University of British Columbia, has been developing several variants of this type of system, which he calls Textobrail, over a period of several years. Educational and employment applications have proved most encouraging.[10]

Indirect Access Approaches

Talking Books. As noted in the discussion of direct access to the printed page, both the sense of hearing and the sense of touch are used as substitute channels for information flow in the absence of vision. But the primary option is the sense of hearing.

The talking book has become pervasive since the 1930s. Its production in disc, open reel, and cassette format has become routinized under well-understood standards in recording and in duplicating. The talking book has been subject to constant refinement and cost-benefit analysis. It has reached the stage at which it can be considered a mature product--that is, one which is produced to meet a well-defined need at the lowest cost consistent with the quality of performance required for it to meet that need. Especially with its use expanded from the blind to the physically impaired population, further refinements will probably be evolutionary not revolutionary: the introduction of better reproducer heads in tape playback units, the reduction in size and weight of reproducers, the increase in information density by use of more advanced tape formulations, and the like. Indeed, the growth of this medium of book (and magazine) presentation has been so spectacular that some have worried aloud that the alternative presentation of text in braille may be suffering "benign neglect,"[11] although recent activities at the Library of Congress in deploying new technologies have alleviated that concern somewhat. The very success of the talking book, however, presents us with the important lesson that *no* single reading aid can serve all purposes, that different aids may be desired or required by the same individual in different situations (home vs. work, for example) or by different individuals in the same setting. Some persons do best with talking books or synthetic speech, while others do best with braille and tactual graphics. *All* can benefit, however, from the armamentarium of choices matched to specific local need.

There are some accessories that adapt talking-book usage to special situations. For example, the Library of Congress has developed light-weight, heavy-duty solar panel for patrons in areas without electricity. Consisting of small silicon cells, it can serve as a battery recharger for cassette machines. The panel was a low-cost project that did not involve new technology but adapted commercially available materials.[12]

Among the most frustrating features of the talking book for the work-oriented user, as contrasted with those who read for pleasure, is that the normal speech rate of 150 to 175 words a minute is too slow—about half normal visual reading speed. In a world burdened with near-overload in information, many users wish to reduce the time spent listening to recorded material. To accommodate such readers, variable motor speed controls have been developed which allow speed-up of discs and tapes, with the accompanying "Donald Duck" effect that these users regard as a small price to pay. Some readers become quite adept at appreciating speech distorted in this way. Library of Congress cassette playback equipment has had variable speed capability since 1976. A better solution permits, with the use of a variable speech module and tape talking book, the speed-up of normal speech rates to twice normal and more without distortion in pitch. One method is the so-called bucket-brigade digital sampling of the normal speech stream; crudely put, the speech is divided electronically into very small segments, some of them are thrown away, and the rest abutted one next to the other for a smooth semblance of speech. The new Library of Congress C-80 cassette machine uses another method of speech compression, delta modulation. The pitch restoration device, which has been incorporated at a cost of about ten dollars a unit, automatically adjusts the rate of compression or expansion to the selected speed, from three-quarter to more than twice normal speed, and has a separate on/off switch for those who dislike the noise any compression system introduces.

Braille. Equally renowned as the product of intervention of another human being between standard print and the visually impaired reader is braille. It has been most encouraging to note that a decline in the use of braille due to the restrictions in the scope and quantity of text available may soon be reversed by using the same compositor tapes to drive automatic braille embossing equipment that are used to generate print text in automatic typesetting equipment. The advent of the computer in press-braille production has also greatly enhanced the capability to produce more titles in braille and in greater quantity. The day may not be far off when the same tape used for print text production can be used as input to a fully automatic braille production system, right down to the folding of the braille book, its stapling, and the application of its shipping label. Can we then speak of indirect access to print text, or no?

The significant innovation involved here is the representation of braille in coded form on magnetic tapes. Although the repertory of information now available in this form is very limited, the potential for applications for readers and users is very great. The major barriers in the use of braille traditionally have been the time required for its production and the space required for storage. Braille libraries groan under the weight of the books stored; braille producers could sink from view under the weight of the heavy zinc plates used for press braille, and the latter problem is avoided only by a risk-taking and judgmental process of weeding out of master plates. Both problems, and also that of the creation of personal braille libraries in readers' homes, could be solved by the compact storage of braille encoded digitally on magnetic tapes and/or discettes. The potential has already been exploited by several manufacturers around the world—the Europeans led the field until recently—in creating small machines which allow the recording of 180 pages of braille or so on one C-90 compact cassette, and the reading of what has been recorded on 12- to 32-character line displays of "refreshable" or erasable braille characters.[13] These devices presently are best regarded as reading machines with a limited library. But they are exceptionally useful as word processors, as personal filing, storage, and retrieval systems for the braille-reading user, and, when properly equipped, as computer readout terminals. The limitation of the display of braille to a line at a time may also soon be lifted when whole pages of refreshable display become available.[14] Already available are embossing terminals which produce braille on paper, in several different models.[15]

Key to the flexibility of these braille display devices is the encoded character of the text. When text is represented in digital form, it is termed machine readable, and, with suitable coding or code conversion, this means that a wide variety of machines can be used to receive and display the text. A library terminal, or a similar terminal located in a user's home or work environment, could be used even now to display text in large print on a television monitor[16] or to generate synthetic speech.[17] Moreover, there are several varieties of braille conversion programs that provide a good approximation to standard grade 2 braille (American version).[18] Systems are now becoming available which generate print text simultaneously with braille text, using a very compact microcomputer, a high-quality printer, and a high-speed braille embossing terminal—with all text modifiable by a typist who has full text editing capabilities at his disposal, and with text stored in machine-readable form on small discettes. It is obvious that the potential that has been talked about in the availability of information in digital form, the use of personal computers at home, and information services of a wide variety of forms—for the sighted, and commercially—is already available for the braille user. This is not the first time that technological development for the blind population has led, not followed, that for the sighted, but it is certainly one of the most exciting areas of development yet seen. To accelerate the process of interchangeability among the codes used by the several manufacturers of machines which read and write digital braille, one attempt was made in an international meeting to achieve a uniform internal code, thus permitting exchange of encoded tapes among the several makes and models of braille reading devices. Despite the best intentions, this effort must be counted a failure: only two manufacturers agreed to limited compatibility.[19] Yet even this problem may be overcome with the use of cheap, large-scale microcomputer memories that can store conversion codes.

It is not a simple task to summarize the explosive developments in the burgeoning field of applied computer technology in the deployment of braille. The potential exists to bring about many of the advantages that a computer-assisted system of library practice allows, as J. C. R. Licklider developed in his exciting book of almost twenty years ago, *Libraries of the Future*.[20] Yet it must be emphasized that this potential depends on the development of many applications in small computer development, the networking of data transmission lines, and the multipurpose large-scale microprocessors in fields other than that of braille reading. The development costs could not otherwise be underwritten for braille alone.

Aids for Physically Disabled People

The high-tech developments described in the prior sections may be seen as required for making up the information deficit that is the result of the reading handicap borne by visually impaired and blind people: since so much information about the world is normally obtained through the visual channel, a great deal of help is required in transducing needed information into the auditory and tactual forms needed by such readers. While those who are physically impaired are individually just as definitely disabled in reading, they possess the enormous advantage of an intact visual channel (unless other impairments are present, of course). Motion and support capability are, by contrast, simpler to provide for the task of reading books and magazines. This perspective does not obtain, however, in the case of the neurologically or developmentally disabled, or also in the case of communications generally: here sophisticated technologies may need to be brought to bear on conveying information between impaired persons and those around them. Aids for print reading for physically impaired people fall generally into two broad categories: book and magazine holders, and page turners.

The remarks made above concerning the comfort of the person during the task of reading bear with particular emphasis on the physically impaired individual. For this reason, book holders and page turners have been designed both for bed use and for wheelchair use. Most consist of a platform and lip which hold the book or magazine at any desired angle and plastic fingers to keep pages down while reading. Models are available for use in the bathtub, for bed/wheelchair/table use, or in very lightweight FormCor to hold magazines or a mirror. Another model allows the book to be placed face down on a clear plastic sheet and projects the page image on a vertical screen; an option allows projection of the image on the ceiling for the reader lying supine in bed.[21] An adjustable book stand which folds for storage is also available.[22]

The turning of pages is difficult for motion-impaired readers, but this disability can be alleviated by battery-powered page-turning devices that can be activated by a puff of air, a pushbutton switch, or a radio frequency sender device.[23]

Readers who are visually or physically impaired present themselves for library services with much the same mix of capabilities and motiviations as do unimpaired persons. In each case, however, they are disabled in their task of reading standard print text. It is hoped that the overview of techniques and aids given here will reinforce the desire and ability of librarians everywhere to assist impaired persons in their need to access the world's knowledge.

NOTES

1. Frank Kurt Cylke, "International Co-ordination of Library Services for Blind and Physically Handicapped Individuals: An Overview of IFLA Activities," *Unesco Journal of Information Science, Librarianship, and Archives Administration* 4:81(October–December 1979).

2. Eric Josephson, *The Social Life of Blind People* (New York: American Foundation for the Blind, 1968), p. 50.

3. The study, published in the *Muenchner Medizinische Wochenschrift*, was cited in the *Bulletin* of the Information Office of the West German Embassy, May 1981, p. 6.

4. For sources and prices of a number of such aids, see U.S., Congress, Library of Congress, National Library Service for the Blind and Physically Handicapped, *Reading, Writing, and Other Communication Aids for Visually and Physically Handicapped Persons*, Reference Circular, no. 82-1, October 1981, pp. 24–31.

5. Two manufacturers of CCTVs are: Apollo Laser, Inc., 6357 Arizona Circle, Los Angeles, California 90045 (213-776-3343); and Visualtek, 1610 26th Street, Santa Monica, California 90404 (213-829-6841).

6. See National Library Service for the Blind and Physically Handicapped, *Closed Circuit Television Reading Devices for the Visually Handicapped*, Bibliography, no. 80-2, September 1980, for a bibliography and a list of manufacturers.

7. See National Library Service for the Blind and Physically Handicapped, *Reading Materials in Large Type*, Reference Circular, no. 79-3, September 1979, for a selected list of large-print books for reference and special needs, together with lists of other sources of information and producers and distributors.

8. Further information can be obtained from Telesensory Systems, Inc., 3408 Hillview Avenue, P.O. Box 10099, Palo Alto, California 94304.

9. Further information about the system can be obtained from Michael Hingston at Kurzweil Computer Products, 33 Cambridge Street, Cambridge, Massachusetts 02142. A selected bibliography on reading machines, including the Optacon and the Kurzweil Reading Machine, is published by the National Library Service for the Blind and Physically Handicapped, *Reading Machines for the Blind*, Bibliography, no. 80-3, September 1980.

10. Further information can be obtained from Dr. Beddoes at 2075 Wesbrook Mall, University of British Columbia, Vancouver, British Columbia, Canada, V6T 1W5.

11. See Leslie L. Clark, "The Future of Braille," in *Studies in Child Language and Multilingualism*, ed. Virginia Teller and Sheila J. White, Annals of the New York Academy of Sciences, vol. 345 (New York: New York Academy of Sciences, 1980), pp. 165–187.

12. NLS supplies, free of charge to eligible persons, equipment such as the solar panel and machines that play talking books but do not record. Blind people can purchase cassette machines that both play talking books and record from the American Printing House for the Blind, 1839 Frankfort Avenue, Louisville, Kentucky 40206,

and talking-book phonographs from the American Foundation for the Blind, 15 West 16th Street, New York, New York 10011. For other sources of machines and accessories, see National Library Service for the Blind and Physically Handicapped, *Reading, Writing, and Other Communication Aids*.

13. Manufacturers of cassette braille recorders and players are: Braillex Division, F. H. Papenmeir, 15659 Dover Road, Upperco, Maryland 21155 (301-526-6444); Braillocord, D. P. Schonherr, Schloss Solitude, Geb. 3, Federal Republic of Germany (0711-69-42-37); Clarke and Smith Manufacturing Co., Ltd., Melbourne House, Melbourne Road, Wallington, Surrey, England (01-699-4411); Elinfa, Inc., Triformation Systems, Inc. (Distributor), 3132 S.E. Jay Street, P.O. Box 2433, Stuart, Florida 33494 (305-283-4817); and VersaBraille, Telesensory Systems, Inc., 3408 Hillview Avenue, P.O. Box 10099, Palo Alto, California 94304 (415-493-2626).

14. Further information on these devices may be obtained from Douglas Maure, American Foundation for the Blind, 15 West 16th Street, New York, New York 10010 (212-620-2000); IBM, Data Processing Division, 1133 Westchester Avenue, White Plains, New York 10604 (914-696-2571); and Rose Associates, 44 Scranton Avenue, Falmouth, Massachusetts 02540 (617-540-0800).

15. Information on embossing terminals may be obtained from George Dalrymple, Braillemboss, Massachusetts Institute of Technology, Room 31-063, 77 Massachusetts Avenue, Cambridge, Massachusetts 02139 (617-253-5331); Triformation Systems, Inc., 3132 S.E. Jay Street, P.O. Box 2433, Stuart, Florida 33494 (305-283-4817); Sagem Société d'Applications Générales d'Electricité et de Mécanique, Département de Télétransmissions, 2 rue Ancelle, 92521 Neuilly, France.

16. Terminals for displaying text in large print are available from these organizations: American Systems, Inc., 123 Water Street, Watertown, Massachusetts 02172 (617-923-1850); Arts Computer Products, Inc., 80 Boylston Street, Suite 1260, Boston, Massachusetts 02116 (617-482-8248); Chromatics, Inc., 3923 Oakcliff Industrial Court, Atlanta, Georgia 30340 (404-447-8797); Intelligent Systems Corporation, 5965 Peachtree Corners East, Norcross, Georgia 30071 (404-499-5961); Daniel Simkovitz, Low Vision Terminal System, Office of the Dean, College of Engineering, Wayne State University, Detroit, Michigan 48202 (313-390-3011); and Radio Shack, Executive Offices, 1600 One Tandy Center, Fort Worth, Texas 76102 (817-390-3011).

17. Companies and individuals engaged in research include: American Systems, Inc., 123 Water Street, Watertown, Massachusetts 02172 (617-923-1850); Arts Computer Products, Inc., 80 Boylston Street, Suite 1260, Boston, Massachusetts 02116 (617-482-8248); Dr. M. P. Beddoes, Beddoes Electronic Aids Limited, 750 West Pender Street, Suite 1700, Vancouver, British Columbia, Canada V6C 2B8; Computer Systems Laboratory, National Institutes of Health, Division of Computer Research and Technology, Building 12A, Room 2033, Bethesda, Maryland 20205 (301-496-1111); and Spelled Speech Voice Attachment for Terminal, J. C. Swail, Medical Engineering Section, National Research Council, Ottawa, Canada K1A 0R8.

18. Braille conversion programs which approximate grade 2 braille are produced

by Tim Cranmer, Division of Services for the Blind, 593 East Main Street, Frankfort, Kentucky 40601 (502-564-4754); Digivox, P.O. Box 4634, Inglewood, California 90309 (213-672-4219); Dotran, Arts Computer Products, Inc., 80 Boylston Street, Suite 1260, Boston, Massachusetts 02116 (617-482-8248); Dotsys, Dr. John Gill, Warwick Research Unit for the Blind, University of Warwick, Coventry, England CV4 7AL (0203-24011) (in the United States contact: Emerson Foulke, Perceptual Alternatives Laboratory, 359 Life Science Building, University of Louisville, Louisville, Kentucky 40208 [502-588-6722]); Duxbury Systems, Inc., 56 Main Street, Maynard, Massachusetts 01754 (617-897-8207); Kurzweil Computer Products, 33 Cambridge Parkway, Cambridge, Massachusetts 02142 (617-864-4700); Maryland Computer Services, Inc., 502 Rock Spring Avenue, Bel Air, Maryland 21014 (301-838-8888); Quickbraille, American Systems, Inc., 123 Water Street, Watertown, Massachusetts 02172 (617-923-1850); Radio Shack, Executive Offices, 1600 One Tandy Center, Fort Worth, Texas 76102 (817-390-3011); Tribraille2, Triformation Systems, Inc., 3132 S.E. Jay Street, P.O. Box 2433, Stuart, Florida 33494 (305-283-4817); Votrax (Speech Synthesizer), Division of Federal Screw Works, 500 Stephenson Highway, Troy, Michigan 48084 (313-588-2050); and United Information Companies, Inc. (UNICOS), Executive Offices, One Federal Plaza, Boston, Massachusetts 02110 (617-482-9622).

19. Leslie L. Clark, ed., *Proceedings of the Meeting on the Unification of Standards for Digitally Encoded Braille* (New York: American Foundation for the Blind, 1978), p. 19.

20. J. C. R. Licklider, *Libraries of the Future* (Cambridge, Mass.: MIT Press, 1965).

21. Two major manufacturers of book holders are: Aparco, Inc., 55 Lee Road, Newton, Massachusetts 02167; and C. Beil Designs, 5435 N. Artesian Avenue, Chicago, Illinois 60625.

22. From the American Foundation for the Blind, 15 West 16th Street, New York, New York 10011.

23. Two representative manufacturers of page turners are H. C. and D. Products, P.O. Box 743, South Laguna, California 92677; and C. R. Bard, Inc., 731 Central Avenue, Murray Hill, New Jersey 07974.

State Programs: A State Librarian's Perspective

Anthony Miele

The materials and equipment produced by the National Library Service for the Blind and Physically Handicapped (NLS) are made available to eligible users through regional libraries, which serve patrons directly or establish subregional libraries to do so. Every eligible reader in the fifty states, the District of Columbia, Puerto Rico, and the Virgin Islands has access to NLS materials through one of the fifty-six regional libraries.

A regional library may be part of the administrative organization of a private institution, a public library, a library system, or a state agency. The majority of regional libraries are administered, in whole or in part, by a state library agency. In several states, programs are administered jointly by the state library agency and another state agency, such as the department of education, institutions, or state. In six states, state commissions are charged with providing all library services or share the responsibility with the state library agency. Whatever the state agency, the regional library is a separate and distinct entity, considered an equal with other divisions of the agency. State library agency–administered regional libraries are the focus of this discussion.

Administration

State library agencies can, in their role as parent organization, provide less expensive and better administrative support by avoiding duplication of services and personnel. For example, the agency acquisitions librarian is able to assist in selecting and ordering book and nonbook materials for the regional library. The agency reference librarian can provide information from the multitude of resources in a

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Anthony Miele, director of the Alabama Public Library Service, wishes to thank Miriam Pace and William Crowley for their assistance in the preparation of this paper.

state library, as well as through interlibrary loan. The public relations division can prepare media releases and arrange other publicity for the regional library. And the field representatives or consultants, assigned by the state library to geographic areas of the state, can act as liaison between the public library and the regional library in identifying potential patrons and aiding the local public librarian to offer personalized service to handicapped readers. Perhaps the most important and far-reaching advantage which accrues to the patrons of a regional library administered by a state library agency is that the state library's entire collection, plus its access to the collections of other types of libraries, is available to them, thus providing vast resources for handicapped readers.

Funding

Generally speaking, a regional library receives state and federal funds. State library agencies usually support regional libraries through allocations of federal monies available under the provisions of the Library Services and Construction Act (LSCA). State library agencies must provide a level of support from LSCA funds for handicapped services in an amount not less than the second preceding year. Such support is in addition to the state funds allocated through the state library agency, or through other state agencies, for the ongoing support of library service to blind and physically handicapped individuals. Special projects to expand the service of a regional library are often secured through donations and through fund-raising efforts of friends-of-the-library groups.

Services, Staff, and Facilities

The basic collection of a typical regional library consists of recreational and informational materials in disc, cassette, and braille formats, supplied by NLS. The regional library is required to house at least one copy of each title, plus sufficient copies of titles needed to satisfy the demands of its patrons.

To provide an in-depth collection, more comprehensive than NLS can supply, regional libraries often produce a wide range of books and magazines of local interest. The utilization of volunteers from the local or state community enlarges the talent base available for the local recording and brailling of books, magazines, newspapers, and other materials requested by patrons. Generally, volunteer narrators are carefully screened by an appointed review board, which is often composed of persons having expertise in broadcasting, theater arts, and communication skills, and includes one or more blind or physically handicapped persons. Many regional libraries have an audiobook production center with sound reduction booths and recording equipment. High-quality recording equipment and sound reduction booths are necessary to produce master tapes of books and magazines. A duplication section of the library contains the equipment necessary to reproduce open-reel tape or cassette tape in the required speed and number of tracks for distribution to patrons. High-speed duplication equipment in various configurations of open-reel master decks, cassette master decks, and slaves (blank tapes) for each master deck is used.

Production and reproduction of braille materials are accomplished by using braille typewriters, Perkins braillers, and Thermoform machines. Braille typewriters are standard typewriters modified to produce braille cells. Perkins braillers are typewriterlike machines that produce braille cells when the six keys are depressed in various combinations. Thermoform braille machines are to braille reproduction as Xerox machines are to print; a heat process transfers the braille from a master onto a plastic-like material called braillon paper.

Special machines are required to play records and tapes produced by NLS or network libraries because they are played at low speeds—8⅓ and 16⅔ rpm for records, 1⅞ and 15/16 ips for tapes. These machines and accessories such as headphones, pillowphones, tone arm clips, remote control units, and speed control units, as well as replacement needles, are supplied by NLS. The regional library is accountable for the machines and accessories, and periodic audits are performed under the supervision of NLS. If a regional library has subregional libraries and deposit collections under its jurisdiction, a clear audit trail of responsibility must be maintained at all times.

Special equipment for blind and physically handicapped individuals is displayed in many regional libraries. This equipment includes Apollo lasers, closed-circuit television devices that enlarge print to sixty times its usual size; Optacons, machines which allow a totally blind person to read print by converting the visual image to a vibrating tactile image which can be felt with the finger; brailled games such as chess, Scrabble, bingo, checkers, and playing cards; talking calculators; and magnifying lenses. Displayed equipment is often available on loan to patrons.

In addition to their braille and recorded collections, many regional and some subregional libraries maintain large-print book collections, as well as core collections of print books on blindness and other physical handicaps. A vertical file for reference and referral gives access to the most current information on aids and devices for handicapped individuals, with updates on progress made in treatment and rehabilitation.

To provide ease of access for patrons, regional libraries offer toll-free telephone service or accept collect calls. Telephone-answering devices give around-the-clock, seven-day-a-week service capability.

The staff of a regional library varies according to the number of patrons it serves; the size, type, and range of services depend on physical plant and funding. A typical staff, however, might consist of the head of the library, one or more reader advisors, a volunteer coordinator, two or more clerk typists-secretaries, two or more audio duplication technicians, and two or more warehousemen.

The facilities used by state agency-administered regional libraries are often accurate barometers of the agency's commitment to library services for blind and physically handicapped persons. In the past, some agencies viewed the program as primarily a service involving only telephones and the U.S. mail. With such a mindset, it was quite acceptable to rent or purchase a large warehouse without provisions for handicapped patrons to visit the library in person. Fortunately, a noticeable change in the public perception of what constitutes adequate library services to blind and handicapped people has been encouraged by state and federal legislation in support of the rights of the patron who cannot use traditional library formats.

Although regional libraries tend to follow a standard pattern conforming to the procedures and guidelines of NLS as stated in the *Network Library Manual,* many regional libraries serve their patrons in innovative ways.

A number of libraries have exercised their creativity and initiative in taking advantage of local opportunities and resources in their use of volunteers. For example, in order to improve the quality of the materials it produces, Arizona uses a Home Review Group composed of volunteers who are regular talking-book clients. These patrons had expressed a sincere interest in the recording program of the library and subsequently proved well qualified to give consistent and informed feedback on each new book produced by the regional library. The group has been very helpful in correcting bad narrator habits, eliminating technical problems, directing book selection, and making changes in format.[1] In addition, Arizona has enlisted the support of two other volunteer groups, somewhat unusual ones: juvenile offenders and the inmates of the Arizona State Prison. The juvenile offenders, many of whom are unemployed students, often prefer to work off a fine rather than pay it. If they do, the juvenile court may assign them to the library for clerical work and other chores. Inmates at the state prison, which has its own recording studio, have volunteered to tape books for the regional library, which is administered by the Arizona State Library. Tennessee also uses prison inmate volunteers but in the production of braille materials. Calling themselves P.I.R.A.T.E.S (Prison Inmates Recording and Transcribing Educational Materials for the Sightless), this group has learned braille. In fact, most participants have become certified braillists. These programs are innovative in either the service provided by or the source of volunteers.

Tennessee also boasts the WPLN Talking Library, a closed-circuit radio station for blind and physically handicapped individuals, free from the Public Library of Nashville and Davidson County in cooperation with the Tennessee regional library. The program provides daily newspapers, newly published books, and magazines to eligible patrons, who tune in using on-loan fixed-tuner receivers.[2] A number of other libraries provide similar services.

A Michigan subregional library has applied for a grant to establish a circulating collection of sculpture reproductions by master artists. Each piece of art is to be accompanied by a braille, large-print, and cassette biographical sketch of the artist and information about the sculpture. Prior to the initial circulation, seminars on tactile examination of art, art history, and art appreciation will be conducted by local experts in the art field.[3]

Some regional libraries are testing innovative approaches to reading, such as the Kurzweil Reading Machine. The KRM recognizes printed characters and converts them into synthetic speech or braille. Material to be read is placed face down on the surface of a scanner which transmits the images to a small computer contained in the machine. The computer recognizes the letters, groups them into words, and computes the pronunciation of each word electronically into synthetic speech or a braille copy of the print.

Developing Trends in Automation

Computerization of reader records, inventory, and statistics is becoming widespread in libraries. Using fully on-line, partially on-line, or batch systems, libraries are converting endless hours of manual paper work into an automated process, thereby freeing staff time for personalized patron service. Automation has also reached the services provided by regional libraries and illustrates the potential of state library agencies as administering agencies for library services for blind and physically handicapped persons. The high cost of automating the operation of a regional library, with subsequent faster and more efficient service, is more likely to be undertaken by a state library agency, which may already have computer capability. Program analysts may already be part of the agency's staff and thus available to create or redesign the software required by the regional library. With costs reduced by utilizing a common computer operation, it is reasonable to assume that in the near future all regional libraries will enjoy the benefits of automation.

Developing Trends in Funding Pattern

Most of the state agencies that administer programs to blind and physically handicapped persons suffer from a lack of funds; however, new laws such as those extending the rights of blind and physically handicapped people through mainstreaming and building accessibility provide a hope for better funding in the future. In some states, the election of blind or handicapped citizens to state legislatures means the regional libraries may have patron legislators in a position to assist them in obtaining increased funding. The regional libraries must not overlook these new-found sources of support in government.

Association of State Library Agencies' Position

At a meeting in 1978 of the Chief Officers of State Library Agencies (COSLA), the members expressed an affirmative stand on providing library services for handicapped people. They endorsed this statement approved in June 1978 by the board of directors of the Association of State Library Agencies (a predecessor of the Association of Specialized and Cooperative Library Agencies) as typical of the commitment of most state agencies with regional library responsibilities:

> It is the position of the Association of State Library Agencies of the American Library Association that library services for blind and physically handicapped persons are an integral part of the mainstream of library service planning and development within each state.
>
> The association recognizes the responsibility of each state library agency to plan, develop, and promote library services which best serve the library and information needs of all persons within that state. It is understood that the planning, development, and promotion of such services will include input from all cooperating agencies and from persons using library services. It is therefore necessary that state library agencies coordinate, monitor, and evaluate the implementation of library services for the blind and physically handicapped within each state.
>
> The association advocates the rights of blind and physically handicapped persons to receive library services from appropriate public, school, special, and academic libraries consistent with each library agency's long range plan and the state's current level of local library development and quality of service.
>
> In taking this position the association recognizes the responsibility of each state to fund library services to blind and physically handicapped persons consistent with funding patterns for other in-state library services and networks.
>
> The association also recognizes the responsibility of the Library of Congress National Library Service for the Blind and Physically Handicapped in library network planning and development on the national level. To fully effect in-state planning for library services for blind and physically handicapped persons, state library agencies and the National Library Service must develop and maintain a close working relationship.
>
> Federal grant funds to support services for blind and physically handicapped persons in library networks must be made available to the states in such manner as to assure the integrity of each state's library development program; and further these grants should be administered in a manner which encourages state library agencies to

implement their responsibility for planning, coordinating, and funding. State library agencies also must have authority for determining the utilization of such grants within each state in keeping with each state's long range program.[4]

NOTES

1. Arizona Department of Library, Archives and Public Records, Library for the Blind and Physically Handicapped, *Annual Report, 1977–1978* (Phoenix, 1978).
2. Katheryn C. Culbertson, director, Tennessee State Library and Archives, letter dated August 16, 1978.
3. Beverly Daffern Papai, "Notes from Oakland County Subregional Library for the Blind and Physically Handicapped, Farmington," material included in a letter from Julie A. Nichol, regional librarian, State of Michigan, Department of Education, dated July 28, 1978.
4. Robert F. Ensley, "State Library Agencies and the Provision of Library Services for Blind and Physically Handicapped Persons," *Catholic Library World* 52:152–153 (November 1980).

The NLS Network

Karen Renninger and Thomas J. Martin

The nationwide network of agencies cooperating with the National Library Service for the Blind and Physically Handicapped (NLS) in Washington, D.C., includes hundreds of state and local agencies: regional libraries, subregional libraries, deposit and demonstration collections, multistate centers, and machine-lending agencies.[1] NLS provides recorded and braille books and magazines for recreational and informational reading, sound playback equipment, reference and bibliographic support, publications, and coordinating support. Network agencies provide space, staff, and all aspects of library service to persons certified by a competent authority to be unable to see well enough to read a conventional print book or to hold a book and turn pages.

Network Libraries

The network of cooperating libraries is divided into four regions: the West, the North, the South, and the Midlands. The libraries belong to their own regional conference, headed by an elected chairperson. Regional conferences generally meet in odd-numbered years somewhere in their own region. In even-numbered years NLS hosts a national conference for all network libraries.

Regional Libraries

A regional library is one designated by NLS to provide library services to individuals in a specific geographic area. Most are administered and funded by state or local governments, some by agencies for blind or handicapped individuals. Funding may be

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supplemented by Library Services and Construction Act (LSCA) grants.

In 1981, the NLS network included 56 regional libraries, at least one in each state except North Dakota and Wyoming. The states of California, Michigan, New York, Ohio, and Pennsylvania have two regional libraries each. The District of Columbia, Puerto Rico, and the Virgin Islands have regional libraries as well.

Routine services provided by regional libraries include circulation of braille and recorded books to readers, usually by mail; communication with readers through newsletters and telephone calls; reader advisory assistance; production of locally oriented materials; outreach and publicity; coordination with and referral to related institutions and agencies; provision of sample aids and appliances; reference; interlibrary loan; duplication of materials recorded on cassette tape; equipment assignment; and publications distribution. The regional library may serve readers directly or it may establish subregional libraries throughout its area to serve some or all of them.

Subregional Libraries

Subregional libraries are local, usually public, libraries designated by a regional library, with the approval of NLS, to provide service to individuals in a specified area of the regional library's total jurisdiction. Twenty-two states have established subregional or branch service patterns. Funding may be provided entirely from local sources or from a combination of state, local, and federal sources.

Subregional libraries must serve a minimum of 200 readers. Generally, their collections are limited to recorded books and are comprised of one copy each of the current and the immediate past year's production of recorded books per 300 readers served.

Numbering more than a hundred in 1981, subregional libraries provide mail and walk-in circulation service for books recorded on disc and on cassette. They also loan the equipment on which to play recorded books, instruct patrons in their use, and assist patrons in the selection of titles. They forward to regional libraries requests for material they cannot supply. They register new borrowers and publicize service to encourage use by as many eligible patrons as possible.

They enlist assistance and support for service from civic groups, volunteers, special interest groups, and the news media.

Subregional libraries also encourage readers to use local library services, if possible, and to become involved in regular library activities. Telephone reference, recorded music, loan copies of paintings and sculptures, book discussion groups, special tours or outings, children's story hours, puppet shows, films, and special exhibits are examples of such typical public library services and activities.

Deposit Collections

Subregional and regional libraries furnish collections of material (at least 100 titles) and playback equipment to institutions having ten or more eligible users, such as nursing homes, convalescent centers, hospitals, or public libraries providing walk-in service to readers. There were more than 19,000 deposit collections in 1981.

Demonstration Collections

Subregional and regional libraries establish demonstration collections in public libraries and other institutions, providing samplings of reading materials and equipment for display and information purposes or to give emergency service to readers.

Advisory Functions

As the agencies that directly serve patrons, network libraries are a valuable advisory resource for NLS. Representatives of network libraries serve on various ad hoc NLS committees, such as those on collection development and automated service, as well as monitoring patron testing of new equipment models and serving on an advisory board to review ALA standards.

Multistate Centers

The number of blind and physically handicapped persons receiving library services through the NLS network increased by 300 percent from 1966 to 1977; the number of cooperating libraries providing service to these readers also increased dramatically. With this rapid growth came the need for a decentralized, broad-ranged structure to bolster the efforts of the library network. Multistate centers (MSCs) were designed to fill this need.

MSCs operate under a contractual agreement with NLS to provide backup materials and related services to network libraries in assigned parts of the country of about thirteen states each. Two MSCs were established in 1974, the South and the West, and two in 1976, the North and the Midlands.

Each center works with NLS and relates directly to the network libraries in its service area, not to patrons. It houses and lends on interlibrary loan all library materials available in the national program. It maintains and circulates special collections of lesser-used materials, including cassette and braille books selected for limited distribution, back issues of magazines, and books produced by volunteers in its area. It stores and lends sound reproducers and allied equipment, and it houses and ships nationally produced program promotion materials such as brochures and catalogs.

MSCs are monitored regularly to ensure that required services are being provided on a timely basis. Contracts are awarded for one year, with an option to renew for another year. Parent agencies of existing centers are either state agencies or independent nonprofit agencies.

Machine-Lending Agencies

State or local organizations are designated by NLS to receive, issue, and control federally owned and supplied equipment, including specially designed record players, cassette machines, and accessories. While most machine-lending agencies are administered by regional libraries, some (sixteen in 1981) are separate agencies.

The machine-lending agency must sign a Lending Agency Service Agreement with the Library of Congress to indicate acceptance of responsibilities. No direct payment is involved. In return for provision of U.S. government equipment, agencies agree to serve all persons eligible for service within their designated geographical service areas. They also agree to assume custodial responsibility for all sound reproducers, other reading equipment, and accessories assigned to them, taking normal security precautions for their safekeeping, and to maintain inventory control over all accountable equipment assigned to them. Finally, they agree to provide inventory information with reasonable promptness, while assuring the confidentiality of records in accordance with local law relating to recipients of Library of Congress reading equipment.

NLS Services

Consultant Program

The NLS consultant program includes one full-time consultant assigned to two of the four regions. Other administrative staff members act as consultants to the other two regions. Consultants respond to requests from librarians for professional advice concerning all aspects of library service generally and of NLS programs specifically. They gather information about specific problems and discern indications of emerging patterns. Consultants serve as initial contacts for network librarians who do not know the appropriate NLS person or office to call and may act as liaison for the network libraries with other NLS units. Consultant services are extended to all libraries in the network, by telephone or correspondence or through personal interaction at meetings. In addition, consultants make personal visits to the MSCs and regional libraries. Thus, they facilitate the movement of ideas and programs from one library to another and communication in both directions between NLS and the network.

NLS has a public responsibility to ensure that materials produced reach and meet the needs of eligible blind and physically handicapped readers. Information about the effectiveness of network libraries is especially important for planning NLS programs. NLS believes it is equally important that network libraries and their sponsoring agencies have qualitative guidelines for administrative purposes. Standards approved in 1979 by the American Library Association[2] (ALA) provide the uniform basis for comparative assessment of network libraries from a collective professional view of desirable service provisions. Data about the status of network libraries in relation to the ALA standards are gathered in an annual survey. In addition, consultants periodically visit network libraries to develop a full picture of library performance.

Other Support Services

NLS offers other support services to help network agencies. A *Network Library Manual,* listing policies and procedures in a variety of areas, is on file at each network library. Inserts are revised as appropriate and distributed. A technical manual for each model of playback equipment, together with video programs and accompanying printed instructions, describe how to repair and maintain equipment. Handbooks or manuals on manual circulation systems, public education, planning barrier-free libraries, and other subjects are available to network libraries. A three-day orientation to NLS is available to new network staff whose travel expenses are paid by their libraries.

Network libraries receive publications from NLS, which also functions as a clearinghouse for reference services and materials relating to physical disabilities. Bibliographies, reference circulars, and package libraries supply background information which network libraries may not be able to find easily on a variety of subjects, such as reading materials in large type, reading machines for blind individuals, and eye diseases of the elderly. Questions that cannot be answered locally are forwarded to NLS.

NLS staff conduct workshops at local sites for volunteers who braille or record books for network libraries. One unit of NLS works full time on training and ultimately certifying braille transcribers and proofreaders. NLS publishes and distributes *Update,* a newsletter for volunteers.

Regular communication with the network is maintained through network bulletins mailed frequently to all cooperating libraries and agencies and a quarterly newsletter, *News.* The NLS network is unique in its history and cooperative nature and a frontrunner in the general library networking world. Through its regional and subregional libraries, machine agencies, multistate centers, and deposit and demonstration collections, it has circulated millions of items and provided a myriad of public library services to meet the recreational reading and information needs of blind and physically handicapped patrons.

NOTES

1. For regional and subregional libraries and machine-lending agencies, see the latest issue of the directory published by the Library of Congress, National Library Service for the Blind and Physically Handicapped, *Library Resources for the Blind and Physically Handicapped*.

2. See American Library Association, *Association of Specializing and Cooperative Library Agencies, Standard for Library Service to the Blind and Physically Handicapped Subcommittee, Standards of Service for the Library of Congress Network of Libraries for the Blind and Physically Handicapped* (Chicago: American Library Association, 1979).

Part Three

School Library Media Services

Ruth A. Velleman and Joan A. Miller

School library media services for handicapped children must be viewed against the background of the development of the education of handicapped children in this country. According to the 1976 annual report of the National Advisory Committee on the Handicapped, there were approximately 8 million handicapped children of school age, about one half of them still without an appropriate education.[1] The Rand Corporation report *Services for Handicapped Youth*, May 1973, cited similar statistics; however, the report stated that educational services were uneven from state to state, with the proportion of children served ranging from less than 20 percent to more than 90 percent.[2] It was because of the need to identify educationally unserved disabled children and to provide a suitable education for them that P.L. 94-142, the Education for All Handicapped Children Act of 1975, was passed.[3] P.L. 94-142 has been called the Mainstreaming Act, but in reality this is a misnomer. What the act actually requires is that every disabled child receive a free public education in the least restrictive environment which is deemed appropriate to his or her special needs. This might well mean placement in a regular school setting, but it could mean placement in any one of a number of special school situations ranging from a special class in a regular school to a special school, either day or residential, or home teaching. An individual educational plan (IEP) must be provided, according to the law, for each handicapped child within each school district, in order to determine proper placement, and the parent is considered to be an active member of the team which makes this determination.

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The Expanded Library Media Center Concept

The fact that many physically disabled children will be appearing in the regular school population and that many others will, in their special school situations, be required to have a richer education, one similar to that offered to their able-bodied peers, will inevitably result in changes in the field of school library service to exceptional children.

In the past, such programs have been rare. The 1973 Rand study does not even mention library service as one of the range of services being offered to exceptional children. Statistics in this field do not seem to exist. Before the 1950s, there are no reports at all of work in the area of library service to exceptional children.

Schools have been slow to make a full range of library media services available to their handicapped students, at least in part because of the widespread practice, until the passage of P.L. 94-142, of maintaining special class placements for many handicapped children. Self-contained classrooms or separate facilities invited the establishment of classroom collections of learning resources and recreational materials[4] and slowed the establishment of integrated library media center services at the local level.

Paradoxically, provision of various media-related services from the federal level has also dampened local initiative and the desire to establish more comprehensive services in some areas of the nation while acting as a catalyst in others.[5]

A third factor which has contributed to the slow growth of programs has been the shortage of personnel trained to work with blind, visually handicapped, and physically disabled children in the school media center setting.

For the most part, blind and visually handicapped children were the first to be served. Physically and mentally handicapped children were the last to be served by the library media field, and, sadly, in many locations services to them remain inadequate. Many schools for exceptional children do not have school libraries, although many more than previously do have some sort of media services. Good libraries have not been considered affordable, and many special educators have not been aware of their importance to the education of disabled children. During the late 1960s and early 1970s sophistication of educational technology resulted in the development of new methods of teaching children with various disabilities. As a result, teaching staff and other professionals, as well as parents, slowly began to become aware of the fact that the trained library media specialist, knowledgeable about where special materials could be obtained, would be a valuable member of the educational team. Classroom collections are being integrated into school media centers, some federally initiated programs are being replicated at state, regional, and local levels, and a few schools of library and information science are beginning to establish courses to train librarians for work with the handicapped in all types of library settings.

The individualized instructional program approach mandated by P.L. 94–142 and the fact that many disabled children have entered regular school programs for the first time will require the acquisition and dissemination of information to teachers and other professionals about the physical nature of disabilities, how to change attitudes of staff and students toward disabled children, sources of support services and information for parents of disabled children, adaptation of physical facilities to accommodate physically disabled people, and special devices for blind and visually handicapped students. This information can best be assembled by the professional librarian, trained to perform this task. At the same time the school library media program itself will have to be adjusted to the needs of exceptional children.

The Barriers Are Really Attitudinal

In order to be able to work with exceptional children and to offer support services to other staff members and parents, library media specialists will have to deal with their own feelings and attitudes toward children who, on the surface, may seem very different from their able-bodied peers but who, in reality, must come to be seen first and foremost as just children. Since our society is so geared toward how people look, it is sometimes difficult to see beyond the visible physical impairment, beyond the wheelchair, the braces and crutches, the facial disfigurement, or the asocial mannerisms of the totally blind child. Disabled people complain about depersonalization, being treated as if they were part of the devices they use to help them in their daily functioning. People tend to talk to a disabled person's companion, as if any disability causes lack of speech, or to assume that a small person is younger than actual chronological age. Basically, physical appearance, in the case of physically disabled people, must be overlooked, the disability viewed as a matter of inconvenience, and positive attempts made to see each child for his or her abilities and similarities with, rather than differences from, the able-bodied.

While these similarities exist, there are differences, as psychological problems do become exaggerated in the presence of a disability.[6] Teenage development, always a traumatic period, becomes more upsetting to the disabled teenager whose growth pattern is slower or whose physical appearance is appreciably different from his able-bodied peers. Adequate sexual information for the handicapped, now more readily available than ever before, should be available in the library for the use of school psychologists, guidance counselors, and other support personnel, as well as for the students themselves.

Parents of disabled children need a great deal of support, and there are now many books that librarians can make a part of their professional collections to provide this help. Parents are often overprotective of exceptional children, and sometimes rejecting. It is not unusual to find a high rate of divorce among the parents of disabled children. Siblings, too, may be severely affected by the presence of a handicapped child in the family. For these reasons, librarians must be aware that often they will need to act as sensitive members of the professional team and be prepared to offer help, in the way of literature, as well as understanding.

Dealing with the concept of death when working with children with terminal disabilities is something which librarians must handle for themselves before they will be able to deal with the emotional needs of fellow staff members or other students. Often younger children are afraid that they will die, too, even though their own disabilities may not be of the terminal kind. Death must be seen as part of the continuum of the life process. It is easier to accept the death of a terminally disabled child when one realizes that the child has been helped toward the best possible quality of life simply by being in an accepting school environment. A library media specialist will gain considerable consolation from having been of some help to such a child.

Attitude is also of importance in dealing with disabled youngsters with severe communication problems. Often these students are classified as being less intelligent than they really are, or less mature, and are treated inappropriately.

To assist with the attitudes of other students toward the integrated disabled child, there is an abundance of good children's literature which offers positive portrayals of handicapped people. While disabled children, for the most part, do not want to read about themselves, it is important that able-bodied children be made aware of the ramifications of disabilities by reading nonstereotypical depictions of handicapped people. *Notes from a Different Drummer: A Guide to Juvenile Fiction Portraying the Handicapped* is an annotated bibliography of such fiction and a worthwhile reference source for children's and young adults' librarians who wish to enrich their collections with positive portrayals of handicapped fictional characters.[7]

Eliminating Architectural Barriers

In order to accommodate physically disabled students, libraries must be architecturally accessible. While extensive adjustments need not be made, it will be necessary to eliminate high-pile carpeting, narrow doors, steps, and door sills. A cluttered floor plan will impede the mobility of wheelchairs and also cause problems for blind or visually impaired students. Perimeter wall shelving is most desirable. When book stacks are used, at least thirty inches (and preferably five feet) of space is needed to permit passage of wheelchairs. A standard wheelchair is twenty-five inches wide, and it is, therefore, advisable that doors be thirty-two inches wide. Wheelchairs need five feet to pass each other and have a five-foot turning radius. Tables should be apronless and without pedestals. A height of twenty-nine inches is desirable. No other special furniture is necessary, unless a special table, or standing box, is prescribed by a physical therapist. Librarians will, of course, need to work with administrators, parents, and medical staff to provide other specialized equipment for special needs.

The most important piece of equipment in the school library is the card catalog, and a sixteen-inch-high base, which can be made by any library furniture supplier, would make this standard library tool accessible to students in wheelchairs. A second cabinet must stand next to the first one, on a similar low base, rather than be stacked on top of it. In some cases, of course, space is not available for this kind of modification; however, handicapped students have full access to the information in the card catalog only when this design is used.

An institutional grade tackless carpet which has a tight weave and is cemented to the floor without a pad is advantageous to students who use crutches and braces, although in some cases even this floor covering is difficult for students in wheelchairs to navigate. When no carpeting is used, a nonskid vinyl floor covering is desirable. Lightweight doors with see-through panels, lever handles rather than door knobs, and metal kick plates are most desirable. Lowered light switches offer even greater accessibility to students in wheelchairs or those of small stature. Study carrels forty-eight inches wide rather than the usual thirty-six inches, provide better room for wheelchairs, as well as space for storage of braillers, special typewriters, and audiovisual equipment.

Once inside the library, many physically handicapped students need only a minimum of assistance to utilize the library's resources fully. As with visually handicapped students, a wide variety of multimedia formats and appropriate equipment[8] will allow physically disabled students to select and use materials according to their abilities and learning needs.[9]

The use of volunteers or library aides may also be appropriate in the school library serving physically disabled students, depending on the severity of restriction of the students' mobility and the degree of accessibility of resources.

Many legally blind and visually impaired students can appreciate displays of large pictures with little detail, outlined in dark colors; three-dimensional displays that can be touched; and maps and globes with distinct outlines. Cassette explanations can be set up to go along with some of these exhibits. Some shelving should be reserved for braille and large-type books.

The Nature of the Population

Physically disabled children are a very diversified group composed of those with birth defects such as osteogenesis imperfecta, dysautonomia, spina bifida, muscular dystrophy, arthrogryposis; neurological impairments such as epilepsy and cerebral palsy; and special health problems such as hemophilia and heart disorders. Students may also be disabled later in childhood or adolescence, by accident or illness, and may be paraplegic or quadraplegic. Visually disabled students have many different types of disabilities, which manifest themselves in different ways. A glossary of brief definitions of some of these disorders has been included at the end of this chapter. Each of these disabilities produces its own unique set of physical and learning problems. Many parent organizations have published pamphlet materials about individual disabilities, which can be procured for little or no money and kept on file in the library for the use of the staff. *Physically Handicapped Children: A Medical Atlas for Teachers* is worth purchasing; edited by two physicians, it offers readable information about many physical disabilities.[10]

Certain general characteristics do apply to most disabled children. They exhibit a wide range of intellectual ability but usually have low social awareness due to lack of worldly experience. A good verbal ability is deceptive as it will, especially in the case of children with spina bifida, frequently consist of repetitive stock phrases. Low academic performance among disabled children may be due to irregular school attendance or to minimal brain damage. In addition, many children disabled from birth develop perceptual problems, possibly because they do not move around in early childhood. For all of these reasons many physically and visually handicapped children tend to perform at a slower academic rate than their able-bodied peers.

Reading Interests

Most disabled children are not interested in reading about disability. When they do, they are quick to pick up inaccuracies and insincerities in the writing. Their interests are usually very similar to those of their peers, and they like to read sports stories, romances, mysteries, science fiction, and various other kinds of books. A book should not be offered to a disabled child simply because of the disability it describes unless such a book is specifically requested. Disabled children do appreciate it, however, when they see children with disabilities portrayed in literature in a positive way.

The Library Program

Handicapped children benefit from the same active library programs as do other children. Appreciation of good literature can be encouraged by story hours during which books appropriate for the listeners' age levels and maturity are introduced. Children who are reading below grade level may not be able to read and appreciate these books themselves. In addition, concept books, which help develop perceptual ability; books about other countries and other cultures, which broaden experiences; books which deal with how to handle emotions; and books which emphasize the sound of language by such devices as repetition and rhyming are all good story hour choices.

Exposure to media, both audio and visual, helps disabled children to acquire listening and viewing skills. Activity records from such companies as Stallman-Susser Educational Systems, Educational Activities, Scholastic Records, and CMS Records are extremely popular with young disabled children during story hours. Creative media from such companies as Weston Woods serve to help disabled children visualize to an even greater extent the stories being presented to them. A really creative media librarian can encourage such projects as original animated films and videotapes. All children should be encouraged to take books home, and, when portable equipment is available, film strips and audiotapes and other media as well.

Many physically disabled children will be going on to higher education, and all disabled children will be leading more active lives than has heretofore been possible. It is important that library skills lessons be offered so that independence in using both academic and public libraries will be acquired. These lessons will be successful if they are geared to the appropriate academic development of the students.

Blind and Visually Handicapped Students

Integration of the blind or visually handicapped child into regular class programs presents the need for special effort. Some recently published materials are helpful to school staffs. *Guidelines for Public School Programs Serving Visually Handicapped Children* presents the principle that there will certainly be a great need for knowledgeable support personnel to help comply with P.L. 94–142; *When You Have a Visually Handicapped Child in Your Classroom* is a companion publication. *Children with Visual Handicaps: A Guide for Teachers, Parents, and Others Who Work with Visually Handicapped Preschoolers* is one of a series published by the Department of Health, Education and Welfare and for sale by the Superintendent of Documents.[11] Other books in the series of eight, Mainstreaming Preschoolers, deal with orthopedically handicapped, learning-disabled, hearing-impaired, emotionally disturbed, speech- and language-impaired, health-impaired, and mentally retarded preschoolers.

Visually handicapped and blind children can participate in all library activities, can certainly enjoy story hours, and can enjoy films when the action taking place on the screen is described to them. Many visually handicapped students need to sit close to the screen. Rear projection screens are ideal, since they allow those who need to get close to do so without blocking the image. Corrective lenses and low-vision aids may also facilitate use of the school library by partially sighted students.

The various formats of many school library materials available today make the development of a school library program for blind and visually handicapped children a challenge and a reward. Large-print, talking-book (on discs), taped, realia, and braille and other tactile materials can become the rule rather than the exception in the school program serving blind and visually handicapped students. It is possible for visually handicapped students to use the card catalog on their own if, as in several libraries, the catalog card is brailled on one side and in large print on the other.[12] Volunteers or aides may be valuable in assisting visually handicapped students in use of the school library. They may also tape or transcribe whole chapters or books for students who need materials not readily available from standard sources.

Advances in machine and computer technology have helped produce such devices as the Kurzweil Reading Machine for the Blind and the very newly developed Kurzweil Talking Terminal. The Reading Machine allows a blind person access to any print material available. The Talking Terminal converts computer-transmitted standard English text into comprehensible synthetic speech.[13]

Close attention to the physical environment is a must when working with the visually handicapped student. Carpeting and drapes help to reduce noise; light colors increase the illumination in the room; desks with adjustable tops can assist the partially sighted. The excellent article "Designing Desirable Physical Conditions in Libraries for Visually Handicapped Children" should be consulted before embarking on library modifications for this group.[14]

Visually handicapped students need a thorough knowledge of the various sources of library materials and services available to them, since, in all probability, they will become adult users of libraries if properly instructed and not frustrated or "turned off" in the search for and use of library and learning resources.

Sources of Materials

Several major providers/sources of library-related materials for blind, visually handicapped, and physically disabled children may supplement local school media center services and thus lend further enrichment to the learning experiences of handicapped students. Their programs are discussed in brief in the following sections.

The American Printing House for the Blind

The American Printing House for the Blind (APH), a nonprofit organization founded in 1858, is the oldest national agency serving blind people in the United States. Its production of educational materials is subsidized under the Act to Promote the Education of the Blind, passed in 1879.[15] APH provides textbook materials in braille, large-print, and recorded form to preschool through secondary school users. It also designs, produces, and supplies reading aids and other tangible aids and equipment as well as consumables such as notepaper and braillon.

Each state receives a letter of credit from APH each year to purchase these materials for students who are registered as legally blind with either the chief state school officer or the state education agency. For educational purposes, a legally blind person is one who has a visual acuity in the better eye of 20/200 or less after the best possible correction or whose field of vision is no greater than twenty degrees.[16] The number of children is determined through a yearly survey and roughly twenty-five thousand are registered annually. Schools and individuals may purchase APH materials for nonlegally blind students if they so choose; however, federally subsidized material is provided only to legally blind students as defined above.

The American Printing House undertakes all aspects of development and production of its materials, from conceptualization through final-product distribution direct to the school serving the student. Quantities of materials produced are generally small, however, and delivery time may be lengthy. Much of the production operation is not fully automated due to the types of materials produced, which may also contribute to some delays in delivery.

The *Central Catalog*, a compilation of all materials produced in braille, large-print, or recorded form by APH, Recording for the Blind (RFB), and other volunteer transcribing agencies, is maintained and updated by APH. Copies of the *Central Catalog* can be found in state education agencies, regional libraries for blind and physically handicapped readers, and some large public libraries.

Contact for APH services is made through the state education agency services for handicapped students or the chief state school officer.

National Library Service for the Blind and Physically Handicapped

In 1931, with the passage of the Pratt-Smoot Act, Congress authorized the Library of Congress to provide a national program of free reading material for blind adult residents. In 1952, the act was amended to remove the world *adult*, effectively making blind children eligible for services and materials. Later, in 1966, the passage of P.L.

89–522 extended service to residents with other disabilities which interfered with their ability to read or otherwise use or hold printed materials.[17] The structure of regional libraries was also outlined in the original legislation.

The basic mission of the National Library Service for the Blind and Physically Handicapped (NLS) of the Library of Congress, formerly the Division for the Blind and Physically Handicapped (DBPH), is to provide books and magazines, and the equipment with which to play them if recorded, to those persons who are unable to utilize regular print due to a visual or physical handicap.

From an initial funding of $100,000 annually and nineteen regional libraries as service and distribution points, the program has grown to a funding level in 1981 of approximately $32,671,650, with fifty-six regional libraries and 101 subregional libraries serving the United States, Puerto Rico, and the Virgin Islands. A readership of 839,000 is served by the program with free loan of braille or recorded recreational material. Users are also eligible to receive equipment and accessories and are entitled to free mailing privileges to return materials. Many of the libraries also circulate their own collections of large-print materials.

Major services of the NLS include the production of over two-thousand braille, disc, and cassette titles and approximately seventy-five magazines each year; the purchase and loan of talking-book phonographs, cassette players, and other specialized equipment; bimonthly production of *Talking Book Topics* (in print and on flexible disc) and *Braille Book Review* (in print and braille), which list new titles in the collection; and production and distribution of catalogs and subject bibliographies to patrons and of reference circulars and other information related to the program to network librarians. The total number of titles in the collection is around twenty-eight thousand. NLS services also include a music library, created by Congress in 1962. The NLS music collection, made up of about thirty-thousand braille and large-print scores and recorded instructional materials, is located in and administered from Washington, D.C.

Actual delivery of services is usually performed by the regional or subregional library nearest the user. In addition to loaning materials, the regional library may pursue a variety of outreach and publicity programs; conduct special programs; produce newsletters, bibliographies, and local-interest materials; and generally provide for appropriate user services.

To be eligible to receive NLS services, an individual must obtain a statement from a professional staff member of a school, library, or hospital or from a doctor, nurse, or optometrist, certifying the disability. The individual may apply for services through the nearest regional library or directly to the Library of Congress. After certification, the regional library will contact the client with appropriate services.

Less than 10 percent of the population served by the NLS program are elementary or secondary school students.[18] Those who are served are receiving primarily supplemental services in much the same way the local public library supplements the school library collection. It should be clear that the NLS program is not, nor was it intended to be, a substitute for a strong school library media program. However, the youth of today are the adults of tomorrow, so every effort should be made to introduce the blind, visually handicapped, or physically disabled students to NLS services, to serve their future as well as their current needs.

National Instructional Materials Information System (NIMIS)

During the long period of growth of special education programs for handicapped people, one area which received major attention at the federal level was the locating and evaluating of appropriate instructional materials for classroom use by handicapped students. A historical overview of the network which supported the growth of the Special Education Instructional Materials Center Network can be found in *The Special Child in the Library*[19] and provides background for the following discussion of the development of the National Instructional Materials Information System (NIMIS I and NIMIS II).

The National Instructional Materials Information System (NIMIS I). From 1972 to 1974, the Bureau of Education for the Handicapped (BEH) funded the development of a computerized file of information on media and materials designed and adapted for use by handicapped learners. The major purpose of this activity was to provide persons involved in the education of the handicapped student population with a wider array of appropriate materials for use in instruction.

The NIMIS I database was originally developed by the National Center on Educational Media and Materials for the Handicapped (NCEMMH), from 1974 to 1977. By 1977 the file contained detailed information on over thirty-six thousand instructional materials judged appropriate for use by handicapped people and was being accessed on a field trial basis by online computer terminals located in the thirteen Area Learning Resource Centers (ALRCs), for Specialized Offices (SOs), and the offices of the BEH in Washington, D.C. The file information included a complete bibliographic citation, plus an abstract of not more than 250 words, field test and evaluation data if available, and descriptors specifying the handicapped population for which the material had been judged appropriate.

All NIMIS I records are also contained in the Online Computer Library Center (OCLC) files, searchable at least by author and title. (It is interesting to note that the NIMIS file contained the first nonprint materials to be loaded into OCLC and pioneered MARC formating for subsequent entries.)

During this period, an *Instructional Materials Thesaurus for Special Education* was developed by a Thesaurus Advisory Committee under the auspices of NCEMMH, to be used both to index and to access the materials in the file.[20] However, since the underlying goal of the support of these networks by the federal government over the years was to build *intrastate systems* for continued provision of needed services, access to NIMIS I began to be viewed as a task to be undertaken by each state education agency, other agencies serving the needs of handicapped learners, or both. So, in October 1977, when a new contract for the development of a second generation data base, NIMIS II, was awarded to the National Information Center on Educational Media (NICEM) at the University of Southern California and NCEMMH had officially discharged its BEH contract obligations, the new contract specified that the *networking* mechanism to be used to access the NIMIS I interim database would be through each state education agency (SEA) and specifically through their administrative offices for handicapped education. The file was also to be released to commercial vendors for service provision on a nonrestrictive basis. If a Regional Resource Center (RRC) was functional within the SEA organization, it could also provide access on behalf of the SEA. The intent was to leave the NIMIS I program intact and make it available both through the SEA to a specialized audience (educators of the handicapped population) and via commercial data base vendors to the information and specialized library services field at large. This also meant that users could continue to access the NIMIS I file while NIMIS II was being designed, developed, and implemented by the new contractor.

NIMIS II (NICSEM) Development. The development and implementation of an "upgraded" NIMIS II data base by the National Information Center on Special Educational Media (NICSEM) at the University of Southern California was based on the encoding of educational media and materials to learner variables, specifically learner outcomes. These data are precisely related to the individualized education plan (IEP) to be developed for each handicapped learner and assists the educator in identifying materials specific to each student's needs as addressed in the IEP. The specificity of this prescriptive approach to the selection of instructional materials was consistent with the BEH thrust of technical assistance regarding implementation of the IEP.

The NICSEM thesaurus is the access tool to the upgraded data base and provides a more extensive hierarchical approach to indexing materials than its predecessor, the third edition of the *Instructional Materials Thesaurus for Special Education*.

Various products and services are available from NICSEM in support of the education of children with handicapping conditions. Several brochures are available from NICSEM which describe the various components of the data base system and how to access each component. Basically, material is available in printed format, on microfiche, or via commercial online computer systems. NICSEM's *Master Index to Special Education Materials* in three volumes contains 40,000 bibliographic entries generally spanning the publication years of 1977 to 1980 and focuses on materials especially designed or adapted for use by special learners. NICSEM's retrieval system has been designed to be prescriptive and descriptive in its indexing of materials. Therefore this *Master Index* has been structured to encourage the user to think in terms of learner objectives and related learner skills rather than of the handicapping condition alone. This approach would appear to be useful to school librarians involved in assisting in the selection of materials to implement an IEP for a blind, visually handicapped, or physically disabled learner.

A total of seventeen subsets of these materials are available from the National Information Center for Educational Media (NICEM).[21]

NIMIS II is also available online from Bibliographic Retrieval Services (BRS). Depending upon the resources available in a particular state, it may also be accessible online via the state office for education of the handicapped or through other educational information centers.

The contract covering NIMIS II expired in September 1980, and at this writing there are no plans to either update or continue input in these data files. Therefore, while the materials each contains are appropriate and useful to librarians working with blind and physically handicapped people, they are dated and must be viewed with that understanding. They do, however, represent a significant media resource and should be utilized to the extent possible.

Recording for the Blind, Inc.

Recording for the Blind, Inc., (RFB) is a national, nonprofit organization which provides taped educational books, free on loan, to blind, visually handicapped, and physically disabled elementary, secondary, college, and graduate students. The service is also available to adults who require specialized reading material in pursuing their professions or vocations. The RFB catalog for 1981–82 includes over 50,000 titles of recorded books, and lists materials available in seventeen languages.

Recording for the Blind records books on request and in some cases provides raised line drawings to supplement the text. There is no charge for recording; however, two copies of the material to be recorded are required. Applications for service may be made directly by the future user to RFB, or a librarian may apply on the user's behalf. RFB does not supply or loan equipment, since several other organizations are engaged in that activity. Most of RFB's material is recorded on eight-track tape, however, so a compatible player is necessary.

Information on all RFB recordings is also forwarded to APH for inclusion in the *Central Catalog* of braille, large-print and recorded materials.

Other Library Media Resources

Several other programs may assist in providing school library services to blind, visually handicapped, and physically disabled people; however, since their priority areas for funding may change periodically, they will be mentioned here only by the title of the legislation; the state or federal office responsible for each may be contacted to determine if needs could be met through funding a specific proposal for services delivery. The legislation is the Elementary and Secondary Education Act, as amended, Title I, Education of the Disadvantaged;[22] the Elementary and Secondary Education Act, as amended, Title IV-B, Libraries and Learning Resources;[23] and the Library Services and Construction Act, Title I, Services to Handicapped and Institutionalized.[24]

The U.S. Department of Health, Education and Welfare issued a publication, *Directory of National Information Sources on Handicapping Conditions and Related Services,*[25] which also contains much helpful data. It is currently being updated under Department of Education auspices and should continue to be an excellent resource for school media staff.

NOTES

1. U.S., Department of Health, Education, and Welfare, Office of Education, National Advisory Committee on the Handicapped, *The Unfinished Revolution: Education for the Handicapped* (Washington, D.C.: Government Printing Office, 1976), p. 1.
2. James S. Kakalik et al., *Services for Handicapped Youth: A Program Overview* (Santa Monica: Rand Corporation, 1973), pp. 92–93.
3. U.S., *Statutes at Large* 89:773; Title 20, *United States Code*, section 1414.
4. Donald C. Adcock, "Media Services for Exceptional Children: Some Current Practices in Illinois," *Illinois Libraries* 59:477 (September 1977).
5. Joan Miller, "Regionalized Support Services for Personnel Involved in Education of the Handicapped," in *The Special Child in the Library*, ed. Barbara Holland Baskin and Karen H. Harris (Chicago: American Library Association, 1976), pp. 165–168.

6. Marie Meier, "The Psychology of Disability" (Speech at the Institute on School Media Services to Exceptional Children, Palmer Graduate Library School of Long Island University, August 1976).

7. Barbara H. Baskin and Karen H. Harris, *Notes from a Different Drummer: A Guide to Juvenile Fiction Portraying the Handicapped* (New York: R. R. Bowker Co., 1977).

8. See Jane Schultz and Rita Posner, "The Library/Media Center in a Children's Hospital," *School Media Quarterly* 6:274–276 (Summer 1978).

9. See Ruth Velleman, "Library Adaptations for the Handicapped," *School Library Journal* 21:85–88 (October 1974); reprinted in *The Special Child in the Library*, pp. 15–18.

10. Eugene E. Bleck and Donald A. Nagel, eds., *Physically Handicapped Children: A Medical Atlas for Teachers* (New York: Grune and Stratton, 1975).

11. Susan Jay Spungin, ed., *Guidelines for Public School Programs Serving Visually Handicapped Children* (New York: American Foundation for the Blind, 1978); Anne Lesley Corn and Iris Martinez, *When You Have a Visually Handicapped Child in Your Classroom* (New York: American Foundation for the Blind, 1977); and U.S., Department of Health, Education and Welfare, *Children with Visual Handicaps: A Guide for Teachers, Parents, and Others Who Work with Visually Handicapped Preschoolers*, developed for the Office of Human Development Services, Administration for Children, Youth and Families, Head Start Bureau, by Lou Alonso et al., Mainstreaming Preschoolers (Washington, D.C.: Government Printing Office, 1978).

12. An example of a card catalog which is brailled on one side and in large print on the other can be seen at the New York State School for the Blind, Batavia, New York.

13. "Kurzweil Talking Terminal Announced," *Kurzweil Report*, Spring 1979, pp. 1–2.

14. Edith C. Kirk, "Designing Desirable Physical Conditions in Libraries for Visually Handicapped Children," in *The Special Child in the Library*, pp. 10–13.

15. See Carl W. Lappin, "At Your Service: The Instructional Materials Center for the Visually Handicapped," *Teaching Exceptional Children* 5:74–76 (Winter 1973); reprinted in *The Special Child in the Library*, pp. 174–175.

16. National Society for the Prevention of Blindness, *Data Estimates on Vision Problems in the U.S.* (New York: National Society for the Prevention of Blindness, 1980), part 2, *Data Analysis*, p. 3.

17. See Catherine B. Wires, "Books for Children Who Read by Touch or Sound," *Quarterly Journal of the Library of Congress* 30:159 (April 1973).

18. "Where Are Our Children?" *1978 National Conference of Librarians Serving Blind and Physically Handicapped Readers: Special Report, Part I*, NLS *News*, special issue, n.d., p. 6.

19. Miller, "Regionalized Support Services for Personnel Involved in Education of the Handicapped," in *The Special Child in the Library*, pp. 165–168.

20. *Instructional Materials Thesaurus for Special Education*, 3rd ed. (Columbus: National Center, Educational Media and Materials for the Handicapped, Ohio State University, 1976).

21. NICEM is located on the campus of the University of Southern California, University Park, Los Angeles, California 90007, and may be reached by telephone: 800-421-8711.

22. U.S., *Statutes at Large* 88:491; Title 20, *United States Code*, section 236 et seq.

23. U.S., *Statutes at Large* 92:2143, 2236; Title 20, *United States Code*, section 3101 (Supplement 3, 1979).

24. U.S., *Statutes at Large* 78:11; Title 20, *United States Code*, sections 351–358 (1976).

25. U.S., Department of Health, Education, and Welfare, *Directory of National Information Sources on Handicapping Conditions and Related Services* (Washington, D.C.: Government Printing Office, 1980). Currently in revision by the Department of Education, Office of Special Education, Room 3119, Switzer Building, 400 Maryland Avenue, S.W., Washington, D.C. 20202.

Glossary

achondroplasia—Inadequate bone formation resulting in a type of dwarfism recognized by an enlarged head and disproportionately shorter extremities.

albinism—A hereditary condition in which there is a lack of pigment throughout the body, including the eyes. It is usually accompanied by a nystagmus condition (see below). Children with albinism are very sensitive to light and sometimes wear tinted glasses.

amputee—A person who sustains the loss of a limb or part. A congenital amputee is one who is born without one or more limbs, attributed to constriction by an encircling band during intrauterine development.

arthrogryposis—A disease of the cells of the spinal cord which control muscle contractions, causing persistent flexure or contracture of the joints with resultant stiffness. May cause extensive deformities.

astigmatism—Blurred vision caused by defective curvature of the refractive surfaces of the eye, as a result of which light rays are not sharply focused on the retina.

ataxia—Failure of muscular coordination.

cataract—A condition in which the normally transparent lens of the eye becomes cloudy or opaque.

cerebral palsy—A variety of chronic conditions in which brain damage, usually occurring at birth, impairs motor control. Symptoms may range from mild muscle incoordination to more severe physical handicaps, and often a degree of mental handicap. The three types of cerebral palsy are: spastic (contracted muscles), athetois (uncontrolled motion), ataxic (poor sense of balance). Often a combination of these symptoms is present at one time.

Cooley's anemia—Hereditary blood disorder.

cystic fibrosis—A chronic lung disease, caused by abnormal mucus secretions into the lungs and pancreas, and now known to involve other organs as well. Life expectancy now, with better treatment, is fourteen years.

epilepsy—A disorder of the central nervous system, causing seizures or convulsions, resulting from uncontrolled electric discharges into the brain. Seizures vary in type and severity.

familial dysautonomia—A genetic disease affecting primarily Jewish families of Eastern European origin. Affects the part of the nervous system which controls sensation and autonomic functions. Causes lack of skin sensation, lack of tears, poor swallowing, and other disorders. Victims rarely survive beyond their thirties.

Freidreich's ataxia—Progressive paralysis of lower limbs, ataxia, and speech impairment.

glaucoma—A condition in which pressure of the fluid inside the eye is too high. Depending upon the type of glaucoma, visual loss may be gradual, sudden, or present at birth. When visual loss is gradual, it begins with decreasing peripheral vision.

hemiplegia—Paralysis of one side of the body.

hemophilia—A hereditary disease affecting the ability of the blood to clot normally.

hyperopia—A condition in which the eyeball is too short from front to back, causing farsightedness.

hypotonia—A condition of abnormally diminished tone, tension, or activity of the muscle.

ichthyosis—Dryness, roughness, and scaliness of the skin, resulting from failure of shedding of the keratin produced by the skin cells, present at birth. 5

Kugelberg-Welander's disease—A slowly progressive neuromuscular disorder affecting children and adolescents and caused by a genetic defect. One of the muscular dystrophy group.

lesion level—The area of the spinal cord that has been injured or become diseased. The type of disability the patient has depends upon the lesion level.

muscular dystrophy—Progressive atrophy of the muscles—no known cure. Duchenne type is the childhood form usually found in schools and is generally fatal in mid or late teens.

myopia—A condition in which the eyeball is too long from front to back, causing nearsightedness.

nystagmus—Involuntary, rapid movement of the eyeballs from side to side, up and down, in a rotary motion, or a combination of these.

osteogenesis imperfecta—A defect in the metabolism of the bone, causing a tendency to frequent fractures.

paraplegia—Paralysis of the lower limbs, due to birth defect, disease, or accident involving spinal cord injury.

poliomyelitis—An acute infectious virus disease, characterized by fever, motor paralysis, and atrophy of skeletal muscles often with permanent disability and deformity and marked by inflammation of nerve cells in the anterior horn of the spinal cord. Also called infantile paralysis.

quadriparesis—Partial or complete paralysis of all four limbs. Also called quadraplegia

retinitis pigmentosa—A hereditary degeneration of the retina beginning with night blindness and producing a gradual loss of peripheral vision. Though some persons with this disease lose all of their vision, many do retain some central vision.

retrolental fibroplasis (RLF)—Visual impairment caused by oxygen given to incubated premature babies.

sickle-cell anemia—An inherited disease found only in blacks, individuals of black heritage, or persons of Middle Eastern ancestry. It occurs when an altered type of hemoglobin is present in the red blood cells, which take on a sickle shaped form. General symptoms include attacks of weakness, jaundice, leg ulcers, malfunctions of certain organs, and a lowered resistance to infectious disease. Usually fatal before the thirtieth year.

spina bifida—A birth defect. A malformation in which some of the vertebrae of the spine fail to develop fully, causing insensitivity in the lower extremities, incontinence, some degree of paraplegia, and sometimes hydrocephalus.

strabismus—Eyes not simultaneously directed to the same object as a result of an imbalance of the muscles of the eyeball.

Public Libraries

Donna Dziedzic

In discussing public libraries and the library service to those of us who are blind and physically handicapped, it would seem helpful first to describe the meanings of *blind* and *physically handicapped* and the services of the Library of Congress national network of libraries serving blind and physically handicapped people. *Blind* tends to make people think of an individual who has no sight whatsoever. *Physically handicapped* usually brings to mind an individual who uses a wheelchair. These preconceptions are not wholly accurate with regard to persons eligible for the library service provided through the national network of libraries, since the network serves individuals with—and institutions serving individuals with—a variety of conditions, including blindness, but not necessarily wheelchair handicapped persons.

By law, persons are eligible for this service on a permanent or temporary basis if they cannot read or hold conventional print material or if they have a learning disability certified by a medical doctor as being of physical origin. In addition to persons with apparent visual or manual impairments, individuals with muscular dystrophy, multiple sclerosis, arthritis, or paralysis following a stroke may be eligible. Persons with conditions, such as cancer or heart disease, which leave them too weak to hold a book, easily raise their heads, or generally remain in a comfortable reading position for any length of time are also eligible. Temporarily handicapping conditions—for example, one or both arms in a cast or a recuperative period which precludes use of the eyes—can make an individual eligible on a temporary basis.

Just as the eligibility requirements are established by law, so is the certification process outlined by the same law. When an individual or an institution requests service, the eligibility condition indicated must be certified by a qualified individual. In most instances, this can be a doctor, nurse, librarian, teacher, or any qualified professional who

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can reasonably assess and verify the existence and nature of the applicant's condition. In the instance of a learning disability, however, the law clearly states that the assessment of physical origin be made by a medical doctor.

For the purpose of this chapter, *blind* and *physically handicapped* will be used to describe those persons eligible for the service called library service for the blind and physically handicapped.

There are, or should be, two primary avenues of library service for blind and physically handicapped persons. One is the national network of libraries serving blind and physically handicapped readers. The other is the local community or public library.

Let us cover first the national network, its services and its structure. Describing the library service itself is very simple. Books and magazines in braille, cassette, and disc formats, as well as audio playback equipment and accessories, are provided free to individuals and institutions eligible for service. Also provided are bibliographies of available titles and other related materials. This is the basic service provided by any library in the national network.

The structure of the national network providing this service has several basic components. They are the Library of Congress's National Library Service for the Blind and Physically Handicapped (NLS), four multistate centers, the fifty-six regional libraries and the 101 subregional libraries (all in public libraries), and, informally, other public libraries which cooperate by referring potential patrons, housing demonstration collections, and in other ways. Each of these agencies in some way provides or supports (or both) the basic program of service offered through the network. The method of provision and kinds of support can vary from agency to agency, depending on the general functions of that agency as well as the local structure and service philosophy.

There is a tendency to view any network such as this as a kind of hierarchical structure. Some view this network as a typical triangle, with NLS at the top and all other agencies in some kind of lower position or classification. Others view the triangle in reverse, with the local agency providing direct service to the public as being on top, and all other agencies arranged lower in the triangle as their geographic or service distance from the patron increases. Either of these concepts presumes that there is some agency somewhere, which, by virtue of being at the top of the triangle, can direct all other components of the structure. There is no one agency within this structure with that kind of control. It can be described better as a series of interlocking systems differing in geographic scope, services provided, and public served. The functions of these agencies are sufficiently interdependent that any one agency could not perform its services satisfactorily without the existence of the other kinds of agencies. In this sense, and in practice, the structure is one that can be truly described as a highly cooperative network.

The one agency that interlocks with all other agencies in the network is NLS. Its primary public is the other agencies in the network. NLS provides little direct service to individual patrons, except music patrons and eligible U.S. citizens abroad, although its staff does try to respond to patrons' requests, needs, and inquiries.

While NLS does not provide direct financial support to other agencies in the network, it does provide millions of dollars in materials, equipment, services, and other in-kind contributions. Perhaps the most apparent of these contributions are the basic tools of the service. NLS provides network agencies with the majority of their titles and equipment, bibliographies, publicity tools, and other program-related materials. Since these items are produced in large quantities, they can be produced more cheaply. With a lower per-item cost, more can be produced. More items produced means more items available to individual and institutional patrons. Also, NLS is the one agency responsible for the general specifications and production of these items. This helps assure a uniform, and generally high, standard of quality for the majority of items available through the network.

In addition to centralizing production of basic materials, NLS also works toward centralizing and streamlining network support functions. Efforts in this area cover a broad spectrum of network activities. The net result of centralization of these functions is improvement of service to the patron through providing methods of communication that discourage inaccuracy and duplication of work effort, while encouraging accurate and prompt response to patrons' needs and requests. Guidelines for service are also provided by NLS in both the network library manual and the network bulletins which both update policy and procedure and disseminate useful information. Further assistance is provided through network consultant services on both the programmatical and technical aspects of the service on an as-needed basis and through regularly scheduled on-site consultant visits.

Because of its central position in terms of network services and because of its geographical area of concern, NLS is able to identify national trends or problem areas. Response to a particular concern by NLS staff will vary given the nature of and the most reasonable solution to a situation. It can be as simple as a phone call or a network bulletin providing information or advice. When appropriate, the response could also be a serious long-term investigation of the problem or a long-range plan for improvement, for example, NLS's recent study conducted by the Harrison Institute for Public Law of the Georgetown University Law Center to provide a comprehensive legal analysis of the eligibility requirements for individuals with learning disabilities. Another example is the long-range plan to provide an automated system allowing prompt data exchange among network agencies nationally.

The four multistate centers, located in Florida, Pennsylvania, Ohio, and Utah, are the component of the network with perhaps the most formal relationship with NLS. Their services to the network are provided on a contract basis. Multistate centers serve primarily the regional libraries in their geographic areas. Their function is the warehousing of program materials such as books, machines, accessories, program-related forms, bibliographies, and publicity materials. These items are provided to regional libraries on an as-needed basis.

At first glance, such a warehousing function may not seem to be of much direct benefit to patrons using the service. However, viewed in terms of the unusual amount of space needed to store materials associated with this service and the fact that the service is provided primarily through the mails, it becomes most important. Storage space is both expensive and at a premium at most network locations. So, the multistate centers pass on an indirect cost savings to the network generally. This can be translated into more monies for other portions of the service. Storage of materials at multistate centers can also help alleviate crowded shelving conditions at local agencies, making it easier physically to locate a book for a patron. If that book cannot be found locally, it is possible to interlibrary-loan it from the multistate center. Since the multistate centers are located relatively geographically proximate to the agencies they serve, books and other materials have less distance to travel through the mails. Therefore, the multistate centers do directly benefit the patron by increasing the number of titles available, helping to assure prompt response to requests, and providing cost and space savings.

The remaining portions of the network—regional libraries, subregional libraries, and public libraries—can vary considerably in public served, function, and philosophy of service. In the historical development of the national network, the characteristics of these components have been largely determined by the local service structure.

No regional library is a wholly independent agency. In addition to its relation to other NLS network agencies, a regional library also has a "parent" agency. The nature of this parent agency tends to define the local structure into which the regional library fits. The parent agency may be a state library, a public library, a private service agency, a state department of education, or a commission providing library and other services to disabled people. The parent agency is important to the provision of service in a state in many ways. It may provide funding to the regional library, although there often exists a separate funding agency. The parent agency usually provides in-kind service, administrative, or facility contributions. More importantly, it usually establishes the service structure in the state as well as service philosophies and emphases.

Illinois, I think, offers a good example of how the parent or funding agency can significantly affect the pattern of service in a state.

At the turn of the century, the Chicago Public Library was providing library service to blind adults from an embossed collection received as a gift. With the establishment of the Library of Congress national program in 1931, the Chicago Public Library was designated as one of the first nineteen regional libraries. Within a year, the service became a separate department within the Chicago Public Library, with its own staff, space, and resources, supported by the Chicago Public Library's budget. This structure remained in place for about forty years. It should be noted that in Illinois this service was identified with library service and public service from its beginning.

As service demand and scope of service increased, the concept of the Chicago Public Library shouldering full financial responsibility for provision of a service offered to all blind and physically handicapped Illinois residents was recognized as inequitable and inadequate by the Illinois State Library. At the same time, there was a growing realization that the service offered through the regional library could not be considered a complete library service, the provision of reading materials being the most basic and traditional of all library services.

In the mid-1960s, the Library Services and Construction Act (LSCA) was amended to provide funding to state libraries for strengthening service to blind and physically handicapped people. At the same time, the Illinois State Library, long responsible for and responsive to library development statewide, was beginning to establish a network of eighteen library systems to support library service at the local level, primarily among public libraries in a geographical area. When LSCA funds were provided through the state library to these library systems to help with the development of library services to handicapped readers along with other services supported by the systems, the concept of subregionalism began to develop as a method of decentralizing the services of the regional library.

Running through these developments can be seen several points which would come to characterize the library service to blind and physically handicapped readers in Illinois: involvement of the state library in service development and funding, identification of services to blind and physically handicapped readers with public library services, and a philosophy of service provision at the local level.

By 1968, the Illinois regional library had received approval from the Library of Congress to establish a network of subregionals in the state. Since library systems were in existence and did have responsibility for both traditional and special public library services, the state library felt that the library system was a reasonable structure on which to superimpose the burgeoning network providing service to the handicapped. Each library system, then, also became a subregional library supported programmatically by the regional library, administratively by the library system, and financially by LSCA grants.

The library systems were able, at different rates of speed, to accept responsibility for provision of service to eligible readers. As experience with developing structure increased, several things became apparent. Subregionalization allowed for significant increases in readership and assured that service was distributed more equitably in terms of both reader access to and agency responsibility for the program. The need for continued funding was recognized as well as the desirability of each system developing implementation of service patterns responsive to particular local service needs and resources. By 1975, library services to blind and physically handicapped readers in Illinois were well on the way to being integrated into a state network supported by the state library and closely allied with public libraries and local service. Both the regional library and subregionals were funded by the state library and, given past history, were beginning to develop into a cohesive statewide network.

While the particulars of the development of services to blind and physically handicapped readers in Illinois are not the same as in other states, they are indicative of how local structure, resources, and philosophy can set the tone and pattern of services in a given geographical area. They also help explain why it is that the functions of the various components of such service, particularly public libraries, differ greatly from state to state.

Depending on the parent agency and development of services in a state, the functions of the regional library can vary in geographic scope, public served, and services performed. For example, some regional libraries provide all services directly to all patrons in a state. In other cases, a regional library may provide some services directly to all patrons in the state while referring them to other agencies for braille service or audioplayback equipment. In states where the service has been decentralized through subregionalization, the functions of the regional library may also vary. It may provide all or some services directly to patrons in a given geographical area, while coordinating and supporting a network of subregionals providing similar direct services in different geographical areas. In states like Illinois, the regional library provides all services directly to the subregionals, which are then responsible for providing service to patrons in their geographical area. Other variations on this theme exist.

While this diverse pattern of service provision may seem somewhat confusing at first, there are two important things to keep in mind.

First, basic service is provided in all states in one way or another. Second, the variety of service patterns and structures is neither good nor bad. Rather, it is an indication of the ability to develop service in a given geographical area in accordance with local resource patterns and service needs.

Just as the functions of a regional library vary from state to state, the activities of subregional libraries will vary not only from state to state, but also within a state. Illinois again, can be used as a descriptor of the variety of subregional activity. Most subregionals are responsible for the direct provision of service to patrons in their geographical area. These subregionals maintain contact with patrons, circulate books and distribute equipment and other items to patrons, and implement programs designed to increase awareness of and about the community served and all other programs associated with the provision of this service. Other subregionals, however, act as mini-regionals. The public libraries in their system area serve as the point of direct contact with and service to the patron. The subregional, in this case, would provide the kinds of support services needed by their local public libraries in maintaining and enhancing the service.

In the various activities of subregionals, the ability to assume the characteristics of a local community can also be seen. An important way in which the subregionals in Illinois differ is the manner in which the local public libraries contribute to the service. Involvement ranges from sufficient awareness of the service to provide appropriate referral to actual provision of both NLS and traditional library service to local patrons. Even in Illinois where the development and provision of services to blind and physically handicapped readers have been closely allied with public libraries, the correct descriptive word has been *involvement* rather than *obligation* in discussing provision of library service to disabled persons through public libraries.

As mentioned earlier, there should be two primary avenues of library service for blind and physically handicapped individuals, one being the agencies associated with the national network of libraries serving this population, which are geared to the provision of reading materials in formats appropriate to their public, and the other being the local public libraries, which provide a wide range of library services to members of their community.

This is to not to say that network libraries have been negligent in supplying to patrons programs of library service beyond the basic provision of reading materials. Many have acquired the resources, staff, and expertise to enhance this basic service with a variety of activities. Some of these are not unlike those found in public libraries, such as story hours; programming of an informational, educational, or entertainment nature; reference and referral service; and conjunctive activities with local educational institutions or museums. Others are directly correlated to provision of service to blind and physically handicapped readers, such as provision of aids and appliances, access to equipment designed specifically for use by handicapped persons, production of reading materials in special formats, radio reading services, and conjunctive programs with agencies and institutions serving the disabled.

Public libraries, too, have not been neglectful of the blind and physically handicapped members of their community. Many have developed programs in conjunction with or separately from local network agencies providing library service to the blind and physically handicapped population. These programs are not unlike network library enhancements of service, ranging from extended traditional library service to programs designed to meet the specific needs of members of the local community who are disabled.

A good many of these program enhancements provided by network and public libraries have met with considerable success. Yet there is something very important missing from all the programs that can be described. Few have had as their planned or implemented long-term goal an integration of network and public library services and publics. Just as the entire national network providing library service to blind and physically handicapped readers is viewed as a special service, so are the activities presented by public libraries for the same community considered at least nontraditional, if not special.

Perhaps a primary reason for integration of services not being effected is that many of the individuals involved—network librarians, public librarians, and consumers—are not convinced that integration is a good idea. If you look at the historical development of the national network of library services to blind and physically handicapped readers, it is natural to come to a nonsupportive viewpoint concerning integration. If, however, you start with the simple premise that blind and physically handicapped persons have a right to as full a range of library services as other members of the community and that all librarians have an obligation to provide service to all members of their community, it is easy to come to a different conclusion, that is, that network librarians and public librarians have a responsibility to work with each other to assure provision of all library services to blind and physically handicapped persons.

The need to provide blind and physically handicapped persons with library service of the same standard and scope available to other members of the community is not at issue; it has been an integral part of library service for some time. The very success of this concept, however, has raised a formidable barrier to integration of services and, therefore, to provision of a full range of library service to disabled persons.

The idea of specialness was essential to the development of the NLS network. In order to assure development and provision of some services to the blind and physically handicapped community, network practitioners needed to emphasize the idea that it was a special service provided by specialists to a special community having special needs. The successful use of this emphasis is evidenced in the development of a recognized, established, and supported network of services for that community. There is one major flaw in the success of the program, however: the network does its job so well that it is considered *the* library service for blind and physically handicapped readers, not *a* library service for that same community.

The emphasis on being special served as a powerful tool in the development of the basic provision of services to blind and physically handicapped readers. It now stands as a primary barrier to providing them with a full range of library services.

Many librarians in the network are considered specialists in the field of library service to the blind and physically handicapped community. A consequence of this is that these specialists can become a bit territorial about their service and clientele. Because theirs are often the only libraries providing service to the disabled in their area, they sometimes begin to think of themselves and to be considered by others as the only ones who can provide service. This situation is not conducive to their urging public librarians to take an active role in serving the community nor to encouraging patrons to avail themselves of public library services. On the other hand, public librarians see a network designed solely to meet the reading needs of the blind and physically handicapped reader, complete with staff, resources, and expertise. The natural reaction is to steer handicapped people to this service, fulfilling the service obligation through referral. This refer-rather-than-serve reaction of many public librarians to disabled persons is not so much an abdication of responsibility as a reaction to what they have come to view as a special clientele requiring special service. In many cases, they may feel that their own expertise or resources are not sufficient to fill a special patron's special needs. As a consequence, they do what they think is the best thing to do, refer the special client to the specialists.

At a recent symposium, the director of the National Library Service for the Blind and Physically Handicapped, Frank Kurt Cylke, commented on the isolating effect of specialization:

> In our work, we are never [considered] a part of the mainstream librarianship. We have the largest and oldest network of libraries in the world, and we have the most advanced technology in bibliographic retrieval, but when the library world talks about networking, we are never mentioned. Others are not aware of our existence; in the literature, in committees, the National Library Service is the invisible man. The question remains: How do we train people-oriented people to serve a community which needs information and recreation as much as the sighted, able-bodied community, if not more so?[1]

Just as the national network of library service to the blind and physically handicapped is isolated from the mainstream of library services, so is the community served by this network isolated from full enjoyment of library services.

The remedy to this specialness, isolation, or segregation lies in the mainstreaming of special services and special publics into traditional library settings, the integration of the national network of library services for the blind and physically handicapped with local public libraries.

Just as there is no one agency which administers or directs the national network, there is no one agency which can administer the integration of special services to blind and physically handicapped readers with local public libraries. Just as the national network is strengthened by its ability to reflect local philosophies, resources, needs, and structures, so can this flexibility and responsiveness be used to further integration of services and publics. Just as the individual components of the national network require the assistance and existence of all other network components to provide a library service to blind and physically handicapped readers, so the network agencies need the cooperation and resources of public libraries to provide complete library services to the disabled. In the same vein, public libraries require the resources, expertise, and cooperation of network agencies to be able to provide service to all members of their local community.

Effecting the integration of special services and publics may seem at first an overwhelming task—particularly if it is viewed as a special solution to the special problems of special service to a special community. If, however, integration is viewed as simply an extension or enhancement of the services provided and publics served by both network and public libraries, mainstreaming becomes a concept that is easier to digest and implement. It becomes even easier if done with the understanding that neither public nor network librarians need to do something special to effect integration. Each need only continue doing what they do well, but with a slightly different focus.

Presenting a laundry list of what network and public librarians can do to further integration is undesirable for several reasons. First, a checklist can be just that, a list of things to do that, once judged impossible, disagreed with, or complied with, stifles further creative and realistic thought or action on the subject. Secondly, given the ability of the network and of public libraries to utilize available resources to respond to particular needs, a checklist might suggest a solution which in many cases may be no solution at all. Thirdly, given the differing creativity, resources, and local service needs, the varieties of activities that could occur to effect integration are endless. And finally, there exists a body of literature that does describe efforts toward this end; some suggested readings are given at the end of this chapter.

It was mentioned earlier that network and public librarians, in order to accomplish integration, need only do what they already do well, but with a minor shift in emphasis. Both need to continue to provide their respective services utilizing the resources available to them, and each needs to expand its concept of its public.

Network librarians must mobilize their resources, expertise, and information, not only to provide service to blind and physically handicapped people, but also to provide information, education, and support to public librarians in their area. In doing so, they must also inform their old public, disabled persons, about their new public, public libraries, and encourage the former to use the latter.

Public librarians must also utilize their resources, expertise, and information not only to serve their traditional public but also to serve members of their public who happen to be blind and physically handicapped. In doing so, they must provide information and education to their old public, traditional public library users, about their new public, blind and physically handicapped people.

Why should either network or public librarians do any of this anyway? Because it benefits all of them and all of their patrons. Integration of services actually makes it easier to provide a greater range of services and information to a greater portion of the whole public. Integration of publics not only encourages acceptance and mainstreaming of the blind and physically handicapped community but also serves to unite two isolated library publics into one group of people called library users.

Rather than reinvent the public library service wheel for the benefit of blind and physically handicapped persons, network librarians should simply tap into public librarians. Rather than, for example, developing from scratch a summer reading program for blind and physically handicapped children, network librarians may serve their publics better by working with public librarians with expertise in summer reading programs and providing the resources and expertise needed to offer such a program to both disabled and nondisabled children.

By the same token, a public librarian may wish to reconsider plans to develop a reference service specifically designed to meet the information needs of blind and physically handicapped persons. It may be more beneficial to develop an excellent program of reference service for the community and to work with a local network librarian with expertise in serving handicapped readers on developing methods of making this service available, accessible, and of interest to disabled and nondisabled members of the community.

As efforts are made to effect this integration of services and publics, network libraries and public libraries will each become less invisible to the other's traditional patron groups. Traditional users of public libraries will become more aware of the handicapped community and network-related services. Traditional users of network libraries will become more aware of public library users and services.

As this occurs, there is a good chance that the scope and quality of service offered both sets of publics will be enhanced and expanded. If public and network librarians continue to do their respective jobs well within the context of intentional integration as has been provided in the context of situational integration, it is very possible that both traditional public library patrons and blind and physically handicapped patrons will be supportive of library service—not library services to blind and physically handicapped people or public library services—but just plain library service. Think of the statement that a unified public supporting an integrated service provided by a cooperative profession can make to a local, state, or national governing body.

Public librarians have an obligation to serve *all* members of their community. Network librarians have an obligation to see that the community they serve has access to the *fullest* range of library services possible. As long as both keep in mind that fulfillment of these obligations requires no special or extraordinarily esoteric activities and keep doing what they do well, it shouldn't be hard to do.

NOTES

1. Krandall Kraus and Eleanor Biscoe, eds., *Summary Proceedings of a Symposium on Educating Librarians and Information Scientists to Provide Information and Library Services to Blind and Physically Handicapped Individuals,* (Washington, D.C.: National Library Service for the Blind and Physically Handicapped, 1981), p. 17.

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Academic Library Services

John Vasi

In recent years, greater attention has been focused on the problems of handicapped individuals participating in academic programs. Enactment of what has become known as 504 legislation has forced institutions of higher learning to reevaluate or, in some cases, examine thoroughly for the first time the accessibility of their facilities and academic programs to students who have any of the mental or physical handicaps covered by the legislation.[1] As part of these self-studies, academic libraries have begun not only to examine their facilities and bibliographic resources but also to evaluate their public service programs in an effort to provide, insofar as possible, responsive and comprehensive library programs for the handicapped students enrolled at their institutions.

Several checklists of items to consider in establishing or evaluating programs for the handicapped student have been compiled. Kent Kloepping includes in "Short- and Long-Range Planning for a Comprehensive Service System" a checklist of concerns for general educational programs, not just academic libraries.[2] His article, however, serves as an excellent background for those new to the concerns of handicapped people and the problems they encounter in educational settings, including universities. William Needham's "Academic Library Service to Handicapped Students" includes a checklist specific to academic libraries, which may be used as a basis for an evaluation of existing library services and facilities.[3] Elaborating on such checklists and specifications, however, is not as helpful as discussing less concrete but equally valid issues which are harder to quantify. These issues are the difficulties and questions that arise in designing or improving services and facilities for blind and physically handicapped students who are covered by 504 legislation and pose formidable access and service problems to academic libraries.[4]

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Of the many factors to consider when discussing academic library services to blind and physically handicapped students, the first which may come to mind is physical access to libraries and their resources. Though the recognition of architectural barriers in libraries and other buildings has long been a concern of library planners and architects, buildings which offer less than optimum conditions and access for handicapped students continue to be constructed. In fact, new buildings which provide functional and comfortable settings for the handicapped are more often the exception than the rule. Citing actual situations may offer some insights. A second and more important factor is a less easily defined issue—that of the level and type of service that can be or should be provided to handicapped students by academic libraries. Architectural barriers, although they present real and formidable problems for libraries, can be considered in quantitative terms. It is possible to design a library that is totally accessible to blind and handicapped students, but the cost of such a facility is usually prohibitive. Academic libraries today are confronted with more basic and philosophical questions addressing the commitment of library personnel, collections, budgets, and special services for handicapped students. The quality of service is more significant than the accessibility of materials and facilities.

Accessibility of Facilities

The accessibility problems specific to academic libraries cited here, for the most part, were designed into new buildings or modifications of older facilities. In all cases, those individuals planning the facilities were attempting to avoid just such barriers and problem areas.

Given the multilocation configuration of many academic library systems on large campuses, the library staff must be sure that all facilities are accessible from transportation routes generally used by handicapped students. It can be assumed that most campus library users will not reach the library by public transportation, as they might public libraries. Either private automobile or specially designed transportation provided by the school is most often used by wheelchair or blind students to reach campus buildings. The questions to be asked about all libraries on a campus are the same: How far is the parking lot (or special handicapped parking facilities) from the library? Are there conveniently located curb cuts for wheelchair users? Can special parking areas adjacent to the building be constructed? Is the path from the parking area or roadway free of obstacles or obstructions which would prohibit handicapped users from easily reaching the building? The solutions to the problems are usually straightforward but sometimes difficult, expensive, and time-consuming to implement unless there is a joint commitment on the part of campus planners, the libraries, and the college or university administration to make facilities truly accessible.

Three examples from one university point up the difficulties. Curb cuts were designed to provide access from roadways to pedestrian walkways leading to libraries and other campus buildings. These curb cuts seem to have been designed to serve a dual purpose—providing inclines for wheelchair users to bypass curbs as well as providing ramps for bicycle riders. While the curb cuts posed no problems to bicycle riders, the gradient, or slope, of the cuts proved to be too steep for wheelchairs. There was no problem when a wheelchair was pushed through the curb cut, but the angle was too steep for most wheelchair users to negotiate alone. In fact, the curb cuts proved dangerous because wheelchairs tended to rock backward too far when going up the short but steep inclines. Moreover, the general access from the parking lots to the main areas of campus proceeded along a seemingly gentle upward incline of several degrees. Although this design is aesthetically pleasing in that it places the academic buildings on a small-scale Mount Olympus overlooking the rest of the campus, even the slight incline posed definite problems and hardships when it had to be negotiated in a wheelchair over 100 yards from parking lot to building. Finally, along this same route, the university planted a number of trees bordering the sidewalks. The trees, adjacent to walkways, were surrounded at their base by open iron grating to allow watering of the trees and to provide the capability of "knocking out" ever increasing sections of the grates as the trees grew. Since the pavement surrounding the gratings was at the same level as the sidewalk, there was literally nothing to warn the visually handicapped student that he might be leaving the walkway and in danger of stepping into a hole in the open grating.

Several other examples will show how even good intentions can go astray when individuals are trying to solve problems with which they have little personal experience. A ramp specifically designed and constructed to bypass an exterior set of stairs to a library building had a 180-degree turn which was almost impossible for a person in a wheelchair to negotiate due to the narrowness of the ramp. In another instance, specially designed doors with pushbutton activators were placed on the side of a building where prevailing winds pile up snow for most of the winter, rendering the doors almost useless to wheelchair users—the intended beneficiaries of the new doors.

It is both interesting and disappointing to note that this campus was designed specifically to meet handicapped access requirements. Campuses pose special problems because there is rarely one person who is responsible for overseeing construction and renovation in order to ensure that handicapped access is achieved. Although planners might take exception to that statement, it is quite true in reality. One cannot assume that all aspects of handicapped access can be covered by guidelines, checklists, and numerical specifications. The problems above attest to what can occur when planners try to design safe and accessible campuses but inadvertently include barriers to handicapped students.

Campus planners are concerned with a variety of architectural, safety, and aesthetic considerations. One cannot expect the gardener designing the tree gratings to consider the problems that such a design might pose for visually impaired students, nor can one assume that it will always be possible to design sitework that will flatten out hills or inclines on campuses. The point to be stressed here is that someone on the library staff, knowledgeable in the problems of handicapped access, should be involved in the design process for new construction and renovation of facilities. It is not sufficient to design the library beginning at the front door and working inwards from there.

Exit control is another problem especially prevalent in academic libraries. In recent years, most libraries have been equipped with electronic exit-control systems which have proven to be obstacles to easy entrance and exit by handicapped users. The object of such systems is to channel exiting students through a specific exit gate which will alert library staff to someone taking uncharged materials from the building. Most detection systems use one-way turnstiles to prevent users from exiting through the entrance doors and avoiding the detection system. The turnstiles, which pose insurmountable problems to wheelchair users, may easily be replaced with entry gates which open automatically when one's weight activates a floor pad on the way into the library. Replacing turnstiles with the gates described above is a very expensive process, but installing the gates initially costs only slightly more than the turnstiles. With more and more academic libraries being forced to install some type of electronic book detection system, it becomes increasingly important to consider the necessity of easy entrance and egress in both normal and emergency situations.

These examples demonstrate that alertness and interest are the main ingredients in designing functional and useful areas for handicapped students. While it is essential that both newcomers to barrier-free design and those who have had experience in working with such planning consult local and federal codes on design, one must always remember that compliance with architectural codes is only the basic step. Vigilance, common sense, and interaction with the handicapped users themselves are all important prerequisites for truly efficient design. While local or state codes may vary, general information on barrier-free design of facilities and furnishings is available in a number of publications. Several of these should be read and kept available for consultation when decisions are being made.[5]

Major decisions must be made when designing a library's equipment, bookstacks, and furniture. It should be repeated that it is possible to design a library area, academic or otherwise, which is totally accessible to handicapped users. The question is, Is the added cost justified when the needs of the entire university or college are considered? For example, several sources recommend an aisle width in bookstack areas of up to four feet to accommodate wheelchair use.[6] Given the fact that a three-foot aisle is sufficient for stacks in a general collection in an academic library, is it realistic to assume that a library should be designed with larger aisles to accommodate wheelchair users? Can research libraries afford to reduce stack capacities by perhaps 25 percent in order to meet such a recommendation on aisle width?[7] To carry the problem further, is it realistic to design a library with all bookstacks at a height accessible to wheelchair users? By both eliminating the top and bottom shelves which are already inaccessible to such users and also implementing the wider aisles, a library reduces by almost 50 percent the stack capacity that would result from providing adequate access for nonhandicapped users. Similarly, should card catalogs be designed at a height to make them totally accessible to wheelchair users, thereby increasing the amount of floorspace necessary to accommodate the catalog area? I believe the answer to such questions has to be no. As ideal as such situations would be for handicapped users, the realistic answer is that libraries and universities cannot afford to construct or modify library spaces to provide total accessibility.

The question of the greater good for the greater number must be addressed when dealing with such situations. Although conventional design of areas such as bookstacks limits freedom and accessibility for wheelchair users, it cannot be assumed that libraries should forego up to 50 percent of their potential collection capacity to accommodate what may well be a minority of less than .5 percent of the total users. Unquestionably, there is some degree of inherent unfairness in this situation. Such unfairness can be mitigated, however, by other means and services which can and should be offered by academic libraries to handicapped users. The concept of functional accessibility, as opposed to total barrier-free design, may be the compromise needed. Functional accessibility might be considered as a combination of programmatic accessibility and proper architectural accessibility. Several interesting points are discussed in "Summary of Discussion and Work Sessions on 'Planning for Architectural Accessibility,'"[8] which indicates that functional accessibility may actually be preferable to complete architectural accessibility because an idealistic approach by campuses may not prepare handicapped individuals for situations they will encounter later in the "real world."

Financial Considerations

It is easy to say that since a number of identifiable problems are encountered in the use of academic library facilities by handicapped students, the solution is merely to eliminate those problem areas. Essentially, this is true, but what has never been fully addressed is the cost of these modifications. These costs may be computed in absolute or relative terms.

In the first instance, one may calculate the amount of money needed to alter facilities and collection development policies to make the library accessible and the collections usable by handicapped students. The short answer to this is that it is not practicable for most academic libraries. The cost of redesigned equipment and facilities or library collections in nonstandard formats (braille, large print) would be prohibitive and, as discussed above, might not serve the general interests of the library and the nonhandicapped population which is its primary clientele.

Secondly, the relative costs must be considered. If one assumes that a library's budget is finite (not a risky assumption), then accommodations for handicapped users or any other category of special users must come at the expense of the primary clientele. While some might take exception to that statement, it is true for the vast majority of examples one could provide. For example, the purchase of large-print materials from the library's acquisitions budget must reduce the number of acquisitions dollars available for other, more traditional, library materials.

Despite the best intentions of federal legislators, and despite the genuine concern of campus administrators that handicapped students should not encounter discrimination of any type in pursuit of their studies, such an ideal situation is not economically feasible. The ultimate aim that libraries, campus facilities, and university programs be available equally to all students is unfortunately not practical at this time. Those involved in academic endeavors, especially librarians, should concentrate on making handicapped users as self-sufficient as possible. However, access to collections and information is often most practically accomplished through specialized services of the library rather than changes in building design or collection formats.

If total self-sufficiency is not practical in library use, what can be done to improve access to collections, encourage use of resources, and provide services to handicapped users within the academic environment?

What Can Be Done

University administrators and librarians find themselves in difficult positions. The intent of 504 legislation mandating that barriers and impediments to education for handicapped students be removed is quite clear. The legislation addresses the problems, but it does not address the ways that solutions to the problems can be achieved without making extreme and perhaps impossible financial and operational demands on the library.

Though the term *mainstreaming* is often used and though the concept is one that all would like to see realized, mainstreaming of certain categories of handicapped students may not be completely possible in the library environment. Basically, the term refers to providing the raw materials of education in such a manner that the handicapped student may use them as any other student would use them. The ideal of mainstreaming would allow all students, despite handicaps, to be self-sufficient in the total library program. Considering the problems cited above, this may not be feasible.

Although it may not be true in every instance, I presently know of no academic libraries that have received funding which could be used to provide the unrestricted access to collections, information, and services that mainstreaming implies. For example, no funds have been appropriated by the government to finance the cost of architectural changes.[9] Estimates of the cost of 504 implementation have ranged from $2.4 billion, by HEW Secretary Califano, to $6 billion, as requested in a 504 amendment by Congressman Jeffords of Vermont.[10]

Libraries are not in a hopeless situation, however. Many ongoing programs are offered by academic libraries to assist handicapped users to become more self-sufficient in their library work and to move into the mainstream of the academic environment. Library administrators and public service personnel have instituted programs which are practical, feasible, and affordable and which comply with the intent of the legislation, if not the letter of it. The recognition of the special needs of handicapped library users is the first step.

Derral Parkin's study of academic library services offered to blind students provides some insights as to what is available and what is desired by blind and visually handicapped students. The desires of the students were for services and equipment that were neither costly nor difficult to obtain but were, for the most part, unavailable at their libraries. The five most common suggestions by blind and visually impaired students at Brigham Young University to improve their library work were:

Obtain an optical magnifier.
Develop a file of material and services available in the university library and the state library.
Provide organized orientation sessions to the library.
Provide a braille map of the library.
Provide listening rooms in greater quantity in the library. (This was the most common request.)

Of the thirty-six university libraries responding to the survey, 72 percent had no file of media available for visually handicapped students and only 3 percent had a file which contained all three types of media—braille materials, large-print books, and talking books. Further suggestions were made, including a file within the library of sources of current information describing library services available to blind and physically handicapped students through state and national agencies. Sources for acquiring braille materials, braille-book reviews, talking-book tapes, and talking-book machines (all free of charge) include the National Library Service for the Blind and Physically Handicapped of the Library of Congress, state libraries, and the New York Library for the Blind.[11]

Wright State University provides an example of an active and low-cost program. The Office of Handicapped Student Services and the Library Media Services merged to take on the responsibility of taping texts needed by blind students for classroom reading assignments. The problems encountered by blind students at Wright State paralleled those of students at other institutions. Although national taping centers supply audiotapes of academic materials to blind students, the common problems encountered include: a lack of immediate access to material in braille; a short time period between notification of book requirements and the start of class; and the use of texts in other than regular chapter sequence. Accepting its responsibility to provide usable and timely materials to all university students, the library set up a taping center of its own. Students and volunteers were taught to tape material correctly—for example, the proper introduction of material, how to indicate footnotes, and how to indicate change of page or chapter. Moreover, library workers explained to faculty the importance of getting book lists to the library four weeks before the beginning of the semester and also of providing the library with course syllabi so that tapes and chapters could be prepared in the proper sequence. The library staff enjoyed total cooperation from the faculty, even to the point of receiving personal copies of difficult-to-obtain materials for taping sessions. Several faculty members volunteered to tape technical or difficult material themselves, and many used the contact with library staff to indicate that the handicapped students should see them if any problems occurred or if they were falling behind in reading assignments or coursework. The taping center at Wright State proved to be a totally positive and effective service.[12] A program similar to the one at Wright State was established at Moorhead State College in Minnesota, using only volunteers for the taping sessions.[13]

Two basic steps should be followed in setting up programs for the handicapped students in libraries. Although the steps may seem self-evident, many times they are not completed or even considered. It is essential that the library staff meet with handicapped students or their representatives in order to ascertain what services are desired or needed, and at what locations. There are no "model" programs which should be instituted or followed. Service is best provided on an individualized basis, making maximum use of input from the actual consumer of the information. Secondly, program goals and objectives should be spelled out; services should not be offered merely in response to crisis situations. The program statement allows the library the opportunity to plan the use of its resources and personnel, and it also allows handicapped students to know what may be expected and to schedule their time and plan accordingly. The organized plan of services and resources available allows students to take greater control of their education, to become more self-sufficient in the library setting, and to be aware of what the library has to offer. Moreover, correlating student requests with services provided may eliminate unnecessary or redundant efforts at various locations.[14]

Due to difficulties encountered in the past in similar contexts, handicapped students may be reluctant to use the academic library and even more reluctant to approach library personnel with requests for information or material beyond that supplied to nonhandicapped users. Most campuses have set up a specific office to assist handicapped students in a variety of ways, and that is perhaps the best place to start when setting up a program for library users. Questions which may be answered by such an office include: What is the size of the handicapped population enrolled at the university? What are the types of handicaps that exist? In which academic programs are handicapped students enrolled? And, possibly, what special library needs exist among the handicapped students? The office of services for handicapped students will probably have a listing of only those students who volunteered information about their handicaps. Since it is against the law to request such information on college applications, the office will be able to ascertain what handicaps exist only by requesting the information from all students. At the State University of New York at Buffalo, the Office of Services for the Handicapped feels that a significant proportion of handicapped students on campus never utilize its services or make their problems known. When information on handicaps is gathered, however, the library can begin the interactive process with the students themselves, and a statement of goals and objectives can be begun.

Due to the wide range of needs of handicapped students as well as their different schedules, it is imperative that students' needs be dealt with on an individual basis. Even though it might initially seem desirable to establish comprehensive programs to assist students, most of their library needs are more successfully met by individual assistance from one or more members of the library staff. It is clearly not practical for each library to have all equipment, resources, and personnel available to respond to special needs of handicapped students at all hours the library is open. An aggressive program by the library to find out the needs of the students is the most important step, followed by a meeting with each student and a discussion of the abilities of the library to meet his or her needs. Another important result of such meetings should be an understanding by the students of how to make their needs known in the future.

A good starting point is for each library to name a contact person for handicapped users in the library. The contact person would take the initiative to set up a meeting or orientation tours for individuals or small groups of students. From this initial meeting, it is possible to get an overview of student needs. Follow-up meetings with students can tailor services more specifically or provide suggestions for assistance. For example, while a library may not be able to order a collection of large-print materials for a visually impaired student, it might be possible to place an optical magnifier in a specific library where a student or several students feel it is most accessible or useful for their study needs. Similarly, the library contact person could arrange times convenient to students when a reader would be available to work with them in the library.

A great many needs and requests of students center on the inability of some handicapped students to reach libraries without time-consuming and difficult trips. A program of extended telephone reference service may be quite beneficial to handicapped students, as would a service to retrieve and mail out materials requested over the phone. While such accommodations do not meet all library needs, they reduce routine trips to the library for known titles and articles that students need, such as reserve reading assignments.

One large university found that the range of service requests from handicapped students was quite broad and varied, but, over a two-year period, in only one instance was it felt that a student was requesting services from library staff that bordered on having the staff do work that the student himself should have been doing. That request was denied and the parameters of the services that the libraries could provide were discussed again with the student. There was no other occasion when the library felt the requests were unreasonable or beyond the ability of the library and its staff to provide.

The library contact person cannot be charged with serving the needs of handicapped students at all times single-handedly. This person should act as the vehicle for handicapped users to make their needs known to the library. Staff awareness and cooperation in providing assistance is necessary; any student is entitled to the expertise available in all library departments. Therefore, it is the task of the contact person, not to assist the student with all library needs, but rather to send the student to the individual who can be of most assistance. This role of expediter is a critical one, reinforcing the necessity of commitment on the part of the entire staff of the library.

Initially, it seemed to many libraries that the solution to meeting the needs of handicapped students lay in identifying individuals on the staff with specific talents and experience to work with students requiring individualized services. In some cases, this has proven to be quite useful. A librarian trained in signed English communication with a deaf student is invaluable in many instances, for example. What has generally proven to be more practical and effective, however, is the cooperation of the entire staff in meeting student needs. Working out arrangements and discussing staff involvement in programs for handicapped students should be a regular and planned activity, with the library contact person addressing the staff as a part of library staff meetings or in regular sessions with the public services staff or administration, when necessary.

The multilibrary configuration of many academic libraries may require a central area which consolidates equipment or special materials needed by handicapped users. Due to the expense of certain equipment, it is probably not feasible to supply all libraries on a campus with all desirable equipment. While in many cases it will be necessary to have a handicapped student use certain resources at a specific location, it may also be beneficial and economically feasible to set up certain areas which house tools and resources most helpful to handicapped students. For example, an area with resources for low-vision or blind students can be set up in the library most easily accessible to such students. This area could contain minimally those tools most commonly used by that group—perhaps an audible calculator, a talking-book machine, a braille writer, a large-print typewriter, and an optical magnifier. Special-task lighting might also be provided. This equipment could be used by visually impaired students with a variety of library or nonlibrary material. Such an area can function not only as a special equipment room but also as a general library study area, just as carrels and tables serve nonhandicapped students. Providing a study room containing those tools and resources needed by visually impaired students is surely a minimal and essential commitment on the part of an academic library to make itself useful and accessible. It should be noted that a library is intended to provide, among other services, usable and comfortable study space for students, whether or not such an area is used with library materials.

Funding and Budgets

As library budgets are prepared for future years, it is important to identify and isolate funding specifically designated for the improvement of services to handicapped students. It is not wrong to take advantage of politically or educationally sensitive issues when drawing up budget justifications, especially when the end result of increased funding is such a positive and rewarding one. When federal and state governments enact legislation designed to assist handicapped students receive a meaningful education, then one must assume a similar commitment to fund such improvements adequately. Indeed, it is a responsibility of campus administrators and librarians preparing budget requests to make known what is needed to implement improved programs for handicapped users. Isolating budget items requested specifically for improvement of services to handicapped library users serves a dual purpose. First, it shows those in a position to allocate funds what the expenses really are. In many cases, equipment, building rehabilitations, or specialized bibliographic materials are more expensive than expected by those unfamiliar with such costs. Secondly, separate budget requests indicate that a library does not mean to utilize part of its ongoing budget for special services, thereby reducing service programs or collections for traditional users. In short, administrators of educational programs should not attempt to absorb all additional expenses in the existing budget. In most cases, it is necessary to use some general library funds for such improvements, but this should not preclude the library from preparing specific and separate budget requests each year for this use.

However, good service programs for handicapped students are not entirely dependent upon persuasive budget justifications. As noted above, staff awareness and commitment is probably the single most effective aid. Pressure on legislators should not be discounted, though. A law enacted in California reimburses universities a specific amount for each disabled student enrolled and was thought to be a system worth considering by other states.[15] Also, volunteer, charity, and community groups are organized in many instances specifically to assist handicapped persons and may look favorably on requests for help from educational institutions. The assistance may come in the form of funding, volunteer services, transportation, or equipment—all of which can become important components in overall service programs. Aside from contacting organizations such as Rotary and Lions Clubs and state agencies concerned with rehabilitation, the library should also discuss its specific needs with the university office which deals with grant funds and other nonuniversity sources of financial support.

Assistance from Library Director

Since many academic libraries function as separate library units tied together by a central administration, a central coordinator for services to handicapped users may be needed in large academic libraries. It would be ideal to have the services of a coordinator on a full-time basis, but the realities of dwindling staffs in higher education make such a situation unlikely. Realistically, a coordinator of services to handicapped students should be selected from a central staff, perhaps part of the library director's office, and should be versed in a number of areas of library administration and service programs. This individual could coordinate the efforts of the contact persons at all libraries and provide the thrust and experience to develop university-wide services, when necessary.

Heading a committee made up of library contact persons, representatives of the university's handicapped students office, and handicapped library users, the coordinator can decide how the limited resources of the system can best be used and in what locations services and equipment can be most helpful. The coordinator should also function as a representative of the director in reviewing possible sources of grants or other assistance and as a liaison with community groups or other organizations which could be contacted for resources. The coordinator can also be effective as the representative of the library who deals with campus agencies (such as maintenance, facilities planning, security police, and campus transportation agencies) to effect the changes needed to respond to special needs.

Central coordination is helpful for improved service programs, assignment of equipment, and overseeing a coherent policy of collection development for materials for the handicapped. It is not reasonable to assume that several individuals working in separate libraries can develop a consistent philosophy or coordinated service programs without leaving some gaps at times and providing redundant services at others.

A number of centrally coordinated programs have been effective in improving service. At the State University of New York at Buffalo, the Office of Services to the Handicapped provided a list of students eligible for special library services. The library instituted a photocopying service at no cost to handicapped students who had difficulties reaching the library, allowing them to phone in requests for specific materials to be sent out through campus or U.S. mail to their residence. The Office of Services to the Handicapped reimbursed the library's cost for photocopying (with federal grant money) and the library paid the postage, when necessary. This truly inexpensive program has been extremely well received and provides a service which is valuable far beyond the resources invested. Also, the library system at Buffalo prepared for the first time recently a supplement to the traditional guide to library services, specifically for handicapped students; it lists services, contact persons, accessibility information and material on tours and orientation programs for handicapped library users. The university is reproducing the supplement in braille and on audiotape.[16]

Central coordination may be quite helpful in providing readers for visually impaired students in the library. Providing readers is an excellent example of a service mandated by the federal government without regard to funding implications for libraries or universities.[17] It is not feasible to have readers available at all times in all libraries, but a central coordinator can schedule readers to meet student needs at specific times in specific locations. Another benefit of central coordination of readers is the reduction in training and interview times. If federal work-study students are available, the cost of the service is minimal, an extremely worthwhile service is instituted, and the intent to comply with legislation is affirmed, even though readers are not available at all times. Functional accessibility is achieved.

Final Thoughts

Just as good library service to handicapped people necessitates commitment from all levels of the library staff and organization, positive learning situations and responsive educational programs require coordinated efforts from all branches of the university community. Individuals within the library who have prime responsibility for developing library services to the handicapped user should enlist the aid of other campus agencies which can provide information and support.

Although the programs discussed involve some added responsibility, it is reassuring and pleasing to note that libraries still function as central information and directional agencies. Students have come to expect assistance from libraries for a variety of educational and informational needs, some of which have little to do with academic programs or library collections. Despite the existence of campus agencies established to assist handicapped students, libraries will continue to function as general information sources for these students for reasons of tradition or, more pragmatically, because libraries are open at hours when other campus agencies are closed.

It is unfortunate, but true, that many higher education institutions did not aggressively attempt to serve the needs of handicapped students adequately until compliance with legislation forced a review of the situation. Without specific federal or state funding available to finance the physical modifications of academic libraries implied by 504 legislation, library staffs are being challenged to develop collections and services to meet specialized needs. Efforts to meet these challenges within existing resources have usually proven to be very successful at those institutions which are committed to provide responsive services and functional facilities.

NOTES

1. Rehabilitation Act of 1973, P.L. 93-112, Section 504, U.S. *Statutes at Large* 87:357; Title 29, *United States Code,* section 794, (1976). As amended, 504 legislation basically prohibits discrimination, exclusion, or denial of benefits against otherwise qualified handicapped individuals by any program which receives federal financial assistance or under any program or activity conducted by any executive agency of the federal government or by the U.S. Postal Service.

2. Kent Kloepping, "Short- and Long-Range Planning for a Comprehensive Service System," in *Proceedings of the Disabled Student on American Campuses: Services and the State of the Art,* ed. Pat Marx and Perry Hall (Dayton: University Publications, Wright State University, 1977), pp. 55–59.

3. William L. Needham, "Academic Library Service to Handicapped Students," *Journal of Academic Librarianship* 3:273–279 (November 1977). This article is especially useful because the checklist attached covers a range of considerations, not merely architectural and bibliographic guidelines.

4. Many examples in the text are based on personal knowledge gained at the State University of New York at Buffalo, University Libraries.

5. See, for example: U.S., Department of Housing and Urban Development, Office of Policy and Research, *Barrier Free Site Design* (Washington, D.C.: Government Printing Office, 1975); Phyllis Tica and Julius Shaw, *Barrier-Free Design: Accessibility for the Handicapped* (New York: Institute for Research and Development in Occupational Education, 1974); and Stephen H. Kliment, *Into the Mainstream: A Syllabus for a Barrier-Free Environment* (Washington, D.C.: American Institute of Architects, 1975).

6. For example, *Making Facilities Accessible to the Physically Handicapped: Performance Criteria* (Albany, N.Y.: State University Construction Fund, 1967), p. 22.

7. John Vasi, "Building Libraries for the Handicapped: A Second Look," *Journal of Academic Librarianship* 2:82–83 (May 1976); reprinted in *Library Services to the Blind and Physically Handicapped,* ed. by Maryalls G. Strom (Metuchen, N.J.; Scarecrow Press, 1977), pp. 174–177.

8. "Summary of Discussion and Work Sessions on 'Planning for Architectural Accessibility,' " in *Proceedings of the Disabled Student on American Campuses,* pp. 43–44.

9. "Summary of Discussion on 'Financing: Who Pays for What?' " in *Proceedings of the Disabled Student on American Campuses,* p. 226.

10. Clarence J. Brown, "Postsecondary Education and the Disabled Student: A Focus on the Future," in *Proceedings of the Disabled Student on American Campuses,* pp. 3–7.

11. Derral Parkin, *The University Library: A Study of Services Offered to the Blind* (Provo, Utah: Brigham Young University, Graduate Department of Library and Information Services, 1974).

12. Pat Marx and Ralph Calder, "Merging Handicapped Student Services with Library Media Services at Wright State University," *HRLSD Journal* 2:7–9 (Fall 1976).

13. "College Establishes Record Library for Blind Students," *Rehabilitation Literature* 32:286 (September 1971).

14. Thomas R. Shworles, "Guidelines for Program Operation: A Focus on Principles," in *Proceedings of the Disabled Student on American Campuses,* pp. 11–14.

15. "Summary of Discussion on 'Financing: Who Pays for What?' " in *Proceedings of the Disabled Student on American Campuses,* p. 226.

16. *Guide to the University Libraries: Supplement for Handicapped Students* (Buffalo, N.Y.: University Libraries, State University of New York at Buffalo, 1977).

17. *Code of Federal Regulations*, Title 45, section 84.44 (d) (1) and (2) stipulate "educational auxiliary aids for students with impaired sensory, manual, or speaking skills" and "readers in libraries for students with visual impairments," respectively.

Training and Research in Librarianship

Kenneth L. Ferstl and Merrillyn C. Gibson

Public Law 94–142, the Education for All Handicapped Children Act, enacted in 1975, enables many physically handicapped students to attend public schools. The act mandates that public schools must educate all handicapped children in regular classrooms along with nonhandicapped children except where placement elsewhere is clearly indicated. The law also requires that schools must provide appropriate services for all handicapped children or see that the proper support services are made available from other local agencies within the school district. There must be an exchange of skills and programs and a pooling of resources if handicapped students are to receive the education to which they are entitled. This cooperation and coordination must include school media centers, public libraries, and learning resources centers in community and four-year colleges. Handicapped children should now be using public libraries and libraries in educational settings accordingly. As mainstreaming increases, librarians in all types of libraries will need to develop a greater awareness of and sensitivity to the needs of the handicapped student. Librarians will need to update their own skills where they are found lacking. Aware, sensitive, and skilled professionals provide the key to successful programs and services which seek to meet the needs of the handicapped.[1]

Physically handicapped people are presently being employed in a diversity of occupations and professions. This trend will undoubtedly continue due to the affirmative action policy for handicapped persons which was established by Section 503 of the Rehabilitation Act of 1973 (Public Law 93–112). Under this law, every employer doing business with the federal government under contract for more than $2,500 must take affirmative action to hire qualified handicapped people. The law applies to job assignments, training, promotions,

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transfers, termination, accessibility, and working conditions and covers all levels of employment, including executive positions. In the aftermath of a federal requirement affecting thousands of companies, new jobs and training opportunities are available to the disabled worker. It is reasonable to assume that handicapped workers will make use of specialized libraries located in the place of their employment or of community public libraries in connection with job training and the development of occupational skills or expertise. Librarians in these libraries should become aware of the needs of this clientele and should gain the skills and expertise to serve it properly. In many instances, handicapped persons will become a part of library staffs and will provide invaluable insights into serving the handicapped worker.[2]

Of special impact for libraries is Section 504 of the Rehabilitation Act of 1973 and the amendments of 1974 which require that "no otherwise qualified handicapped individual . . . shall, solely by reason of his handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."[3] This regulation applies to all recipients of funding from the Department of Health and Human Services (HHS) and the Department of Education—recipients which include schools, colleges, hospitals, and libraries. Where necessary and possible, program adjustments must be made to accommodate an individual's handicap. Handicapped individuals must be given equal opportunity to participate in programs or activities in existing facilities, which must be made accessible. Structural changes must be made if there is no other way for a program to be made accessible. However, compliance does not automatically mean that facilities must be altered. Some alternative arrangements are acceptable, but priority should be given to an integrated environment in which both disabled and nondisabled individuals may participate. Every program, when looked at as a whole, must be accessible in the most integrated, least segregated manner. Approaches to accessibility which have been suggested by HHS and the Department of Education for libraries include the use of bookmobiles, messenger services, and home visits, and the provision of ramps. Librarians must become aware of the means through which all library programs and services can be made accessible to handicapped people, thus enabling them to become active participants in those services and programs.

In addition to pinpointing discrimination, these laws require definite action. They mandate free, individualized education programs in existing school facilities; the right to employment, with emphasis on an individual's ability to do a specific job; and the provision of auxiliary aids. These statutory demands recognize that individuals with special needs, categorized as handicapped, are unique citizens who can lead productive lives and that such expanded civil rights call for basic changes in society.[4]

If handicapped people are not making use of libraries, it may be because they have not received the services or materials to which they are entitled when selecting the library as the agency to assist them in meeting their informational, educational, or recreational needs. As Eleanor Brown has observed, "most librarians have not had the special training needed to work with the physically handicapped most effectively."[5] In many instances, it is the lack of special training which is at the root of ineffective library services to handicapped persons. Genevieve Casey provides some specifics related to special training when she states that what is "needed are additional study on the reading interests and needs of the blind and physically handicapped, technological research, and more librarians especially prepared to work with this group," as well as "more continuing education such as has been offered in the USOE [U.S. Office of Education] institutes" and "more emphasis on this special service in the basic curricula of the library schools."[6]

Students in library schools must be made aware of both the possibilities for and the problems of library services to handicapped library users. Issues which should be considered for presentation to these soon-to-be practitioners include: available library services, programs and equipment; appropriate reference materials; standards of accessibility for library buildings and facilities; employment of disabled persons on library staffs; and maintenance of referral services to sources of appropriate information and aid within the community.

Educational Programs

The National Library Service for the Blind and Physically Handicapped (NLS) conducted a survey in June 1976 to determine which ALA-accredited library schools offered special courses, seminars, workshops, and institutes to prepare librarians to serve handicapped clientele.[7] The schools were resurveyed in December 1978 to update the findings of the previous study. Each of the sixty-three ALA-accredited library programs in the United states and Canada, as listed in the 1978 directory of the Association of American Library Schools, was surveyed.[8] Sixty-three of the schools (100 percent) responded to the request for data. The results of those returns are summarized in Table 11-1. (Results of a resurvey by the NLS in October 1980 are included in Appendix D.)

TABLE 11-1

1978 NLS Survey of Special Programs to Prepare Librarians to Serve Handicapped Individuals

	Number of Schools	*Percent of Schools*
1. Total number of schools surveyed	63	100
2. Response to questionnaire	63	100
3. No response to questionnaire	0	0
4. Formal Courses		
a. Presently offered	12	19
b. Planned in future	13	21
c. Not planned	38	60
5. Special Institutes	2	3
6. Workshops and/or Seminars		
a. Presently or recently conducted	10	16
b. None conducted but willing to sponsor	50	79
c. Not interested in sponsoring	3	5
7. Specialized Independent Study	3	5

Twelve of the responding schools (19 percent) offered formal and specialized courses of instruction to prepare librarians for serving physically handicapped readers. Such coursework included the study of issues, library programs and services, types of media, and the special needs of serving a physically handicapped clientele. Three of these courses gave special attention to rehabilitation; two courses emphasized bibliotherapy. Two schools offered specialized programs in the study of gerontology. One school offered a post-master's certificate program made up of a series of courses, practicums, tutorials, and an internship.

Forty-eight schools (76 percent) reported that, although they offered no separate courses in this area, the discussion of services to disabled library users was included as a part of course offerings on such subjects as library services to adults, library services to the disadvantaged, public library management, seminar in public services, and services to special groups.

Fifty-one of the schools (81 percent) reported that specialized courses were not being offered. Of these schools, thirteen (21 percent) indicated that plans were underway to offer specialized coursework in the future.

Thirty-eight of the schools (60 percent) which were not offering coursework at the time of the survey indicated that they had no plans to incorporate courses relating to library services to physically handicapped people in their curriculum in the future.

Two schools (3 percent) reported offering week-long specialized institutes to prepare librarians to serve handicapped library users effectively. Instruction in these programs consisted of lectures by appropriate guest speakers, films, demonstrations of equipment and aids, discussions of issues and problems, and an examination of existing facilities and services. The respondents indicated that the provision of such institutes was dependent upon the availability of grant funding to support such specialized offerings.

Ten schools (16 percent) reported offering separate workshops, seminars, or colloquiums concerned with library services to physically handicapped patrons. Sixty schools (95 percent) indicated that they would be willing to consider the sponsorship of future workshops, seminars, or special programs. Fifty of these schools (79 percent) had not previously undertaken coursework or programming in this area. Three schools (5 percent) were not interested in conducting or sponsoring workshops or seminars at any time.

Special curriculum techniques which library schools have incorporated within their training programs are: appropriate interdepartmental opportunities for specialized coursework, independent study projects (tutorials), and practicum and work-study experiences in hospitals, libraries, and other related facilities.

Recommendations

Since 95 percent of the library schools participating in the 1978 survey reported that they would be willing to sponsor workshops on library services to the handicapped, it would appear that the workshop is a readily approved technique for educating students and practitioners alike in this field of library service. It is hoped that NLS regional librarians for blind and physically handicapped people, with support from state and local librarians, will encourage such program development and will participate in special workshops and seminars at library schools in their geographic areas. These professionals can share their first-hand knowledge of and insights into existing services, program planning and techniques, and facilities. Experienced librarians in this field should readily accept opportunities to speak to library school classes, to offer tours of their library facilities, and to participate in other appropriate ways in library education programs. The use of experienced regional librarians and other practitioners by library schools will help to enhance their curriculum offerings in this area of librarianship.

Opportunities to participate in specialized institutes are extremely beneficial in helping school, college, and public librarians gain an awareness of the various programs, services, and media which are available to the handicapped patron. The institute should also be used to help experienced librarians keep up with technological developments in this field.

The concentrated program continues to be an excellent means of educating the practitioner as well as the library school student. Such a program should consist of a diversity of learning experiences, including: basic information sources, films, demonstrations and hands-on projects with media and equipment, practical work experience, field trips for the on-site examination of facilities and services, and attendance at professional meetings or conferences concerned with the needs of the handicapped reader.

Specialized Library Education Offerings

The data gathered through the 1978 NLS survey to determine which ALA-accredited library schools offered special courses, institutes, and workshops to prepare librarians to serve handicapped persons indicate an increase of specialized program activity in library school curriculums since the undertaking of the 1976 survey. Among the ALA-accredited programs which offered specialized opportunities for students and practitioners interested in library services to handicapped patrons, the following are particularly noteworthy. (The programs are arranged alphabetically by parent institution.)

The University of Alabama, Graduate School of Library Service, offered a two-week workshop for twenty-four community librarians throughout Alabama. A large component of the workshop focused upon library services to handicapped readers and library resources and media for special individuals.

The State University of New York, Albany, School of Library and Information Science, offered a week-long program to provide academic and public librarians who work with adults the opportunity to develop appropriate attitudes toward handicapped people and to learn effective means of serving them. The program was designed for persons who were then or would be working with mentally or physically handicapped people or who would be responsible for such programs on the state, regional, or systems level. The objectives of the institute were to establish awareness of needs and problems of handicapped persons, to investigate methods of providing library and information services to special groups, and to prepare participants to plan, implement, and evaluate programs for handicapped individuals. Curriculum content in the institute included: historical background about library services to handicapped persons; attitudes toward handicapped people; psychology of disabled persons; users' expectations of library service; library design; specialized resources, such as information systems, clearinghouses, and data banks; legislation affecting libraries; special aids and equipment; and funding sources.

The University of California, Berkeley, School of Library and Information Studies, received three Title II–B (Higher Education Act) fellowships for students in the master's degree program to specialize in services to disadvantaged groups. The service area of study permitted a student to specialize in library services to handicapped people during the time period of the funding.

The Catholic University of America (Washington, D.C.), Department of Library and Information Science, offers a post-master's certificate program for librarians who want to strengthen their management skills, update their technical background, and interact with leaders in the field of library services to handicapped readers. The twenty-four-hour credit curriculum includes advanced management and technology courses in the Department of Library and Information Science and cooperating departments, subject seminars, practicums, and tutorials.

The two subject seminars offered are: "User Groups: Issues and Problems in the Handicapped Field" and "The Institution and the Disadvantaged." "User Groups" emphasizes the characteristics and needs of the handicapped library user and is designed to increase the manager's understanding of and skills in serving this special clientele. Resource people lecture on library services to hearing impaired, blind and partially sighted, aged, and physically handicapped populations. "The Institution and the Disadvantaged" focuses upon the desocialization of the individual by public and private institutions and covers services for handicapped persons in hospitals, nursing homes, special schools, and correction institutions. Rehabilitation techniques, including bibliotherapy, are explored. Visits to libraries, agencies, and information centers specializing in services to the handicapped are conducted to give participants an opportunity to interact with leaders in the field of services to handicapped readers. Laboratory sessions for the teaching of American Sign Language are also incorporated into the seminar.

A year-long internship in bibliotherapy is offered at St. Elizabeth's Hospital in Washington, D.C. The student receives didactic and experiential training in the uses of bibliotherapy under the supervision of psychiatrists and bibliotherapists. Students also participate in a program to do research in rehabilitation at the National Rehabilitation

Information Center located on the campus of Catholic University. Participants have an opportunity to research rehabilitation literature and to gain practical experience with rehabilitation databases.

The University of Denver, Graduate School of Librarianship, offered intensive one-week courses entitled "Library Services for the Handicapped" in December of 1977 and 1978. The instructor for the 1977 class was Harris C. McClaskey, associate professor of librarianship at the University of Minnesota Library School. The course was designed for students and library practitioners interested in developing information services for persons who are blind, deaf, or visually or physically handicapped. Topics presented during the course included: history of medicine and of library services to handicapped populations; an overview of the user as an individual with a disability; the establishment, organization, and development of libraries for handicapped readers; staffing, collections, and services of such libraries; grant applications; public relations; and communication with library users.[9]

The instructor of the 1978 course was Phyllis Dalton, former California state librarian. Topics for discussion included: the psychological and behaviorial manifestation of various disabilities; an overview of current library services to handicapped persons; technologies which assist disabled persons; and federal and state agencies which can assist in the development of library service programs for handicapped individuals.

For several years the University of Denver has offered a week-long workshop in bibliotherapy conducted by Arleen Hynes, C.P.T., of St. Elizabeth's Hospital in Washington, D.C. Participants become acquainted with the process of bibliotherapy and its many uses in public, school, and institutional libraries.

The Florida State University, School of Library Science, offered the five-day institute "Library Service to the Handicapped: Instructional Material for Inclusion in the Core Curriculum of Library Schools" for faculty members of library schools. The objectives of the institute were to acquaint participants with different aspects of library service to handicapped persons; to discuss instructional material developed especially for the institute on library service to handicapped persons; and to develop strategies for incorporating the instructional material into the core curriculum of library schools. Lectures and films dealt with such topics as national library services and networks; training and employing handicapped persons in libraries; demonstrations of equipment for visually handicapped library users; and the history and standards of library service to handicapped individuals.

Florida State also offers the course "Library Services to the Blind and Physically Handicapped," in which various aspects of service are covered. Lectures are presented by social workers and other practitioners with handicapped people and libraries and facilities for handicapped individuals are visited. The course is taught by Gerald Jahoda. Instructional materials concerned with library service to handicapped readers recommended by the previously identified institute are used during the course.

In 1979, the School of Library Science began a master's-level program which provides a specialization in library service to handicapped persons. This program can be completed in one calendar year and includes specialized coursework offered by the library school as well as courses offered by other schools and departments within the university. Students enrolled in the program are encouraged to intern in a local library serving handicapped persons or to participate in similarly oriented research projects.

The University of Hawaii, Graduate School of Library Studies, offers a gerontology specialization for library school students. The curriculum covers library services to aging persons and concentrates heavily on the special needs of aged handicapped individuals.

Kent State University (Ohio), School of Library Science, offers the specialized seminar "Library Materials and Services for Students with Special Needs" for the purposes of exploring the implications of some aspects of exceptionality; examining criteria for choice and sources of library materials; and identifying, describing, and developing appropriate library media services. A special workshop on bibliotherapy was conducted on campus by Rhea Rubin, former librarian of the Library for the Blind and Physically Handicapped at the Oregon State Library.

Long Island University, Palmer Graduate Library School, offers the course "Library Service for the Handicapped" taught by Ruth Velleman, library director at the Human Resources School. Designed to aid librarians in serving the needs of handicapped patrons, it covers clinical definitions of disabilities; psychology of disabled persons; literature of medical and vocational rehabilitation and special education; rehabilitation counseling; architectural barriers; assistive devices; information networks; introduction to the needs of handicapped children; and organization and administration of a rehabilitation library. Field trips to special facilities are an integral part of the course.

The University of Maryland, College of Library and Information Services, offered the half-day workshop "Toward Providing for Persons with Handicaps: A Plan for Action." The workshop was cosponsored by the Disabled Student Services Department of the university. Topics presented included: accessibility of buildings and facilities; problems to anticipate in library services; reading aids and devices; and bibliographic sources.

The University of Minnesota, Library School, offers courses and workshops coordinated by Harris C. McClaskey. The course "Health Science Libraries" covers the organization and administration of libraries devoted to serving the health services community; current trends (including modern techniques of health sciences communication and the development of library systems); and an introduction to the literature of medicine and related fields. "Library Services for the Handicapped" is a course designed to enable students to learn how library services for handicapped persons have developed and how they are organized; how services change under social, economic, and technological developments within society and the health professions; how interdisciplinary research and methodologies can be utilized in the development of library services; and how research and analysis can be joined to study selected problems.

The two-week workshop "Library Services for the Handicapped" is offered each summer to establish an awareness of the field of library services for handicapped people through the study of historical foundations and environmental settings of library services designed for specific users who are perceived as impaired or handicapped; objectives, standards, and programs of libraries; organization and management of library resources, facilities, and technology, and the characteristics, development, and problems of cooperative systems.

St. John's University (Jamaica, New York), Division of Library and Information Science, offers "Materials and Services to the Perceptually Handicapped," designed for practitioners and library school students. The course includes the following areas of study: the psychology of the exceptional reader; reading media and equipment; library techniques; organization and administration of rehabilitative libraries; and special library programs for the handicapped reader. The course incorporates laboratory experiences providing hands-on projects with reading equipment and work with exceptional, physically handicapped, and aged readers at Jamaica Hospital and other facilities in the area.

The University of South Carolina, College of Librarianship, offers "Library Services to Institutionalized and Physically Handicapped Populations" to acquaint students with the problems and needs involved in providing library services to persons in correctional, mental, and health institutions and to persons unable to read conventional printed materials because of a physical handicap.

The University of Washington, School of Librarianship, offers "Hospital and Institutional Libraries," a course emphasizing general orientation in the field of library services in health facilities. Topics of study include the organization and techniques which apply to different types of hospitals, institutions, and extension services divisions of public libraries. Special emphasis is given to bibliotherapy and rehabilitation. The course "Library Services for Special Populations" attempts to acquaint students with the library and information needs of aging, handicapped, and institutionalized populations; to investigate what libraries are doing to meet these needs; and to explore the skills, insights, and attitudes which are needed by librarians working with these populations.

"New Ways of Thinking About Disabled People," a two-day workshop, was designed for persons who interact with the service providers to disabled persons in schools, libraries, health-care centers, and recreational facilities. The objectives of the workshop were to help participants acquire insights into the psychology of disabled people; to learn how specialists in appropriate professions are assisting disabled persons; and to become acquainted with the changing political and legal status of the handicapped population. Workshop presentations included topics such as federal and state legislation affecting handicapped individuals; interdisciplinary professional cooperation; and advocacy issues.

Wayne State University (Detroit, Michigan), Division of Library Science, offers "Library Service to Special Groups," taught by Genevieve Casey. The course is designed to acquaint students with the library and information needs of handicapped individuals and groups; what librarians can do to meet these needs; and what skills, insights, and attitudes are needed by librarians working with these special groups. The course focuses upon institutionalized groups, and field trips to appropriate facilities are an integral part of the course. A one-day workshop on bibliotherapy was conducted on the Wayne State campus.

Western Michigan University, School of Librarianship, offers "Library Programming for the Handicapped Child," which utilizes realia and special storytelling techniques as approaches to programming for handicapped children from preschool to age fifteen.

The University of Wisconsin–Madison, Library School, offers a twelve-month specialist program in gerontology under the direction of Margaret E. Monroe. The objectives of the program are to develop leadership personnel in library services to aging persons and to prepare experienced public librarians to design, conduct, supervise, and evaluate programs of service to aging persons. Interprofessional interchange is encouraged in the fields of nursing, occupational therapy, and social work. This course of study emphasizes library service to older people, information and research service to professional agency staffs (such as social workers and recreation directors) and education of the general public about aging and its problems. Emphasis is placed upon programs of library service to the aging population, information and referral services, agencies serving aging people, legislation, bibliotherapy, funding sources, and the design of in-service training in library service to aging people. Other library school students may do independent study in services to handicapped people.

Research Efforts in Library Education Settings

In November of 1978, a survey was made to determine the research activities and projects on various aspects of library services to blind and physically handicapped persons undertaken by library schools in the United States and Canada. The survey instrument was mailed to the 100 library schools listed in the 1978 directory of the Association of American Library Schools.[10] Of these schools, 63 (63 percent) were ALA-accredited and 37 (37 percent) held associate institutional membership in the association, that is, were nonaccredited schools.

Table 11–2 shows the responses from and the research efforts in the

TABLE 11–2
Responses from and Research Efforts in 100 AALS-member Library Schools

	Number of Schools	*Percent*
1. Number of AALS-member schools surveyed		
a. Accredited	63	63
b. Nonaccredited	37	37
	100	100
2. Responses to questionnaire		
a. Accredited	50	62
b. Nonaccredited	31	38
	81	100
3. No response to questionnaire		
a. Accredited	13	68
b. Nonaccredited	6	32
	19	100
4. Schools reporting research activities		
a. Accredited	15	68
b. Nonaccredited	7	32
	22	100
5. Schools reporting no research activities[1]		
a. Accredited	48	62
b. Nonaccredited	30	38
	78	100

1. Includes schools that did not respond.

100 AALS-member library schools. Returns were received from 81 of the 100 schools included in the survey (81 percent). Fifty of the 63 ALA-accredited schools returned questionnaires (79 percent). Thirty-one of the 37 nonaccredited schools returned questionnaires (84 percent). Thus, of the eighty-one responses, fifty (62 percent) were from ALA-accredited schools and thirty-one (38 percent) were from nonaccredited schools. Of the 19 schools choosing not to respond, 13 (68 percent) were ALA-accredited and 6 (32 percent) were nonaccredited.

Tables 11–3 and 11–4 show the responses from and the research efforts in the sixty-three ALA-accredited and the thirty-seven nonaccredited library schools respectively. Twenty-two of the eighty-one respondents (27 percent) reported research activities, while fifty-nine reported no such activities (73 percent). Fifteen of the fifty ALA-accredited schools returning questionnaires (30 percent) reported research activities related to handicapped people, while thirty-five schools (70 percent) reported no such activities. Seven of the thirty-one nonaccredited schools returning questionnaires (23 percent) reported research activities, while twenty-four (77 percent) reported no such activities.

TABLE 11–3

Responses from and Research Efforts in
63 ALA-Accredited Library Schools

	Number	*Percent*
1. Responses to questionnaire	50	79
2. No response to questionnaire	13	21
3. Schools reporting research activities	15	30
4. Schools reporting no research activities	35	70

TABLE 11–4

Responses from and Research Efforts in 37 Nonaccredited Library Schools

	Number	*Percent*
1. Responses to questionnaire	31	84
2. No response to questionnaire	6	16
3. Schools reporting research activities	7	23
4. Schools reporting no research activities	24	77

Research projects and activities have been undertaken, or are currently being undertaken, by both students and faculty in the reporting schools. Table 11–5 shows the types of research activities reported by twenty-two AALS-member library schools.

Research projects undertaken by students fall within three categories: 1) research undertaken to meet a course requirement, for example, the preparation of a term paper; 2) research undertaken for the preparation of a master's thesis; and 3) dissertation research at the doctoral level. Thirteen of the twenty-two schools (59 percent) reporting research activities indicated that student research activities had been done to meet course requirements. There may, in fact, be more library schools where this is the case, but which did not identify such activities. (The questionnaire did not specifically request the identification of activities resulting in such papers.) Two schools (9 percent) reported thesis research related to handicapped people and three schools (14 percent) reported doctoral research in this area. Five schools (23 percent) reported research activities undertaken by faculty members. All of the reported research activities, with the exception of three, were completed at the time of the survey.

TABLE 11–5

Types of Research Activities Reported by 22 AALS-member Library Schools

	Number of Schools	*Percent*
1. Research for student coursework	13	59
2. Research for Master's thesis	2	9
3. Research for Ph.D. dissertation	3	14
4. Faculty research activities	5	23

Student Research for Master's Program Classes

Thirty-seven titles of student papers were identified by respondents. An examination of these titles revealed a wide diversity of subjects related to handicapped people.

By far the most popular subject was an overview of the provision of services to a particular group of handicapped persons. Specific publics examined included ambulatory disabled, blind and visually impaired, deaf, homebound elderly, and physically handicapped persons. It would appear that in most instances these papers were based upon an examination of the existent literature in the area of service. It should be noted, however, that in several instances the paper combined findings in the literature with research on the provision of services within a stated locality.

Surveys of services available to handicapped persons in libraries within a particular geographic area were also popular. Student papers have investigated services provided by libraries in the Fox River Valley of Wisconsin; by patient libraries in northern New Jersey; by public libraries in Utah, Pennsylvania, New York, and Ohio; and by university libraries in Utah, Idaho, Wyoming, Colorado, New Mexico, Nevada, Montana, and Arizona. Surveys of services provided by libraries in specific university settings include the University of Oklahoma, Brigham Young University, and the University of Alberta.

The handicapped child was a topic of considerable interest to library school students. Topics explored included the mentally retarded child, realia libraries for handicapped children, after-school programs for learning-disabled children, and storytelling for blind children. Additional topics of student papers included the following:

- the availability of specific library materials, particularly the provision of talking books and tapes;
- historical studies, including a study of historical perspectives on aging in America from 1790 to 1978 and histories of the Library of Congress Division for the Blind and Physically Handicapped (now NLS), and the Henry L. Wolfner Memorial Library for the Blind and Physically Handicapped in St. Louis;
- attitude studies on the employment of handicapped persons in libraries as well as on librarians' attitudes toward services and materials for handicapped people;
- accessibility of facilities;
- standards of service for handicapped people;
- legislation related to handicapped people; and
- physically handicapped individuals as depicted in children's literature.

Research for Master's Theses

Two theses related to blind and physically handicapped people were identified by respondents. "An Investigation of Large Print Publishing in Relation to Library Services for the Handicapped" was prepared by Vivian B. Swingle in 1978 for the Master of Arts degree at the University of Chicago. Swingle examined "the commercial large print book industry that began around 1965 and the library response to the new reading materials it produced." The study included library programs involving large-print materials, "the national library network that has evolved around the Library of Congress Division for the Blind and Physically Handicapped," and an analysis of the kinds of materials available in large print as included in two editions of *Large Type Books in Print*.[11]

"The Frequency of Representation of Handicapped Characters in Books Annotated in the 1976 Children's Catalog" was prepared by Rhonda Jo Vinson in 1977 for the Master of Science in Education degree at Southern Illinois University in Carbondale. The purpose of

Vinson's study was to "determine the representation of mentally and physically handicapped major characters in books listed in the 1976 edition of the *Children's Catalog*." Specifically, the researcher set out to determine "whether 10 percent of the 5,415 books in *Children's Catalog* concerned a handicapped major character, whether 50 percent of the books found would be in the K–3 reading level and whether 50 percent of the books found would be in the 4–6 reading level." Vinson's data revealed that 40 of the 5,415 books (.75 percent) concerned handicapped major characters and of these titles, 9 books (22 percent) had a kindergarten to third grade reading level, and 32 books (78 percent) had a fourth to sixth grade reading level.[12]

Research for Doctoral Degrees

Four doctoral dissertations related to library services to blind and physically handicapped persons were reported by respondents. "The Career of the Handicapped Librarian: A Study into the Effects of Physical and Psychological Barriers" was prepared by George Garry Warren in 1978 for Florida State University. The purpose of Warren's research was "to study the effects of physical and psychological barriers upon the professional careers of selected physically handicapped librarians as well as their appraisal of the current working conditions and opportunities in librarianship." Data were gathered from an eleven-page questionnaire completed by forty-two handicapped librarians. Among Warren's conclusions were the following:

The same number of handicapped librarians worked in technical services as in public services, with almost one-third in supervisory or administrative positions.

One out of every five handicapped librarians in the study reported having been denied a position based solely on handicap. For the hearing-impaired librarian, job discrimination was nearly twice as great.

Discrimination existed to a lesser degree in library schools and in continuing education.

Most handicapped librarians are satisfied with their jobs.

Considering all the variables, librarianship is a rewarding career for handicapped persons.[13]

Cozetta White Buckley's dissertation "Media Services for Exceptional Students: An Exploratory Study of the Practices and Perceptions of Library Media Specialists in Selected Southern States" was prepared in 1978 for the University of Michigan. The purpose of Buckley's study was threefold: "(1) to investigate the status of library media services for exceptional students enrolled in public schools of selected southern states, (2) to ascertain the opinions of media specialists on factors pertaining to the education of media professionals who work with exceptional students, and (3) to explore the relationship between selected characteristics of media specialists and schools and the variables adequacy of resources and frequency of services provided exceptional students." Data were gathered from responses to a questionnaire completed by 364 public school media specialists in Alabama, Kentucky, Louisiana, Mississippi, and Tennessee. Buckley's major findings as reported in an abstract furnished by the researcher include the following:

Media specialists perceived the collections of resources to be "moderately adequate."

The overall frequency for media services provided was rated "occasionally."

The organization of resources used by exceptional students followed the general pattern of organization.

The adaptation of facilities and other accommodations surveyed and required for the physically handicapped were generally lacking.

The policies which govern use and access to the media center apply to all students.

Media specialists perceived a need for training in special education.

The two preferred alternative avenues for training were continuing education programs at the school/district level and the integration of special education content into existing library science courses.

Buckley's primary recommendation was that further research was needed through which models for media services could be developed for exceptional students in a mainstreamed setting.[14]

Research for another dissertation related to media services and resources and the exceptional student was in progress at the time of the survey (November 1978). Florida State University doctoral student

Judith F. Davie was undertaking a survey of school library media resources for exceptional students in Florida public schools. This descriptive study will survey school library media resources for exceptional children concentrating on materials, equipment, facilities, and personnel. The data gathered will provide the basis for a comparison of the resources that are available with the resources that are needed to serve exceptional students. Davie defined the exceptional student to include those who are mentally retarded, speech impaired, deaf or hard of hearing, blind or partially sighted, physically impaired, emotionally handicapped, socially maladjusted, suffering from a specific learning disability, and gifted.[15]

The final dissertation reported was Kenneth Leon Ferstl's "Public Librarians and Service to the Aging: A Study of Attitudes" prepared in 1977 for Indiana University. The purpose of Ferstl's study was threefold:

> to ascertain the extent to which attitudes held by public librarians were in accord with the principles stated in "The Library's Responsibility to the Aging";
>
> to ascertain the extent to which attitudes of public librarians were in accord with the principles and standards pertinent to library services to the aging as stated in *Minimum Standards for Public Library Systems, 1966;* and
>
> to determine the attitudes of public librarians toward commonly accepted misconceptions and stereotypes held about the aged and to what extent the attitudes held differ.

Data were gathered using a questionnaire completed by 229 public service librarians in public libraries in Wisconsin, Illinois, Indiana, and Michigan. Although this study did not focus directly upon handicapped people, responses to several statements of standards and principles have pertinence for elderly handicapped individuals. Services of potential importance to handicapped aging adults which were supported by the respondents were the provision of library services to meet the needs of homebound aged people and the improvement of library facilities to make the library an easier place for older people to use. Areas of service which were not strongly supported by respondents were programs on aging and its problems specifically for older people, library services to meet the needs of institutionalized aged individuals, and the provision of bookmobile service beyond the immediate environment of the community library. Of the stereotypes and misconceptions related to the physical characteristics of older adults, the respondents tended to agree that older adults walk slowly and need glasses to read. However, they strongly refuted the concepts that older people have poor coordination, are hard of hearing, feel tired most of the time, have to go to bed early, and are confined to bed a great deal because of illness. All of the stereotypes related to the mental deterioration of older people were rejected by the respondents.[16]

Research by Library Science Educators

Five schools reported research activities by members of their faculties. C. Edward Carroll has studied, on an ongoing basis, the problems which handicapped students have relative to access to the School of Library and Information Science and the Library Science Library at the University of Missouri–Columbia. Included in Carroll's continuing investigation are the identification and costs of alternative approaches to overcoming physical barriers in facilities.

Genevieve M. Casey, Wayne State University, Division of Library Science, undertook a study to determine the degree of user satisfaction with books on cassette as opposed to books on disc or reel-to-reel tape by patrons in the regional libraries for the blind and physically handicapped at the Cleveland Public Library and at the Cincinnati–Hamilton County Public Library. From the data provided by 300 users on the effectiveness and acceptability of cassette books, Casey concluded that "the great majority of handicapped people of all ages, physical handicap, educational level and living situation would prefer books recorded on cassette because of their ease in use, compactness, portability, and sound fidelity." The complete results of the study are published in *The Ohio Cassette Book Project: An Investigation of User Satisfaction*.[17]

Eliza T. Dresang's 1978 paper "Library Education's Decision-Making on Courses in Library Services to Special Publics" at the Library School of the University of Wisconsin–Madison presented case studies on decision making in initiating and sustaining courses designed to prepare librarians to serve special users. Three decision-making models were tested and each of the cases illustrates a different model. Handicapped and elderly people were included by Dresang as users with special needs.[18]

M. Doreen E. Fraser of the School of Library Service at Dalhousie University is the compiler of a "Roster of Observations About Programmes and Activities for Elders in Eight Western Europe and North American Countries." Compiled at the request of members of "caring professions," the document is a roster of effective and proven ideas and programs observed during the author's travels in Britain, Norway, Denmark, the Netherlands, France, Switzerland, the United States, and Canada.[19] Fraser is also working on a directory of information resources in geriatrics and international gerontology. Included in the directory will be brief descriptions of useful organizations and the identification of resource persons arranged under topics. Name and geographic indexes will also be prepared.[20]

Margaret E. Monroe of the Library School of the University of Wisconsin–Madison is the author of *The Use of Print and Other Media in Nursing Homes of Wisconsin in 1975*. Monroe's study "of the physical, social and professional climate of Wisconsin nursing homes for the use of print and other media" was coordinated with a study of public library services to Wisconsin's older adults. Funding was provided by a grant from the McBeath Foundation of Milwaukee, with administrative support from the Faye McBeath Institute on Aging and Adult Life at the University of Wisconsin–Madison.

Responses from 203 nursing home administrators, field visits, and interviews provided the data. Among Monroe's findings were: (1) most library resources are made available in nursing homes through recreation staff ("librarian surrogates") and (2) fewer than 70 percent of nursing home residents choose the radio or television programs they experience, so that reading choices are among the few individualized choices residents make. Since 1978 Monroe has studied the reading of older men and women in the Milwaukee Federated Library System. The purpose of this project is to test hypotheses about the reading of older adults relative to the selection of fiction vs. nonfiction, "life task" orientation of book use, and retirement as a factor affecting the use of books. This study is also funded by the McBeath Foundation.[21]

College and University Library Services for the Handicapped Student in Texas by James L. Thomas of the School of Library and Information Sciences, North Texas State University, Denton, is a "directory listing services, equipment, and accessibility to academic libraries" in Texas. Undertaken in 1978, the project was funded by the College and University Libraries Division of the Texas Library Association and by North Texas State University. Data gathered by questionnaire were provided by 133 college and university library directors in 107 separate institutions. Thomas's findings included the following:

Libraries not having materials in braille or on tape for the blind and not providing special reference service for blind individuals indicated that they would secure the materials or make arrangements for user needs if requested to do so.

Seventy-two percent of the libraries had some kind of special equipment available for the handicapped student. Tape recorders and electric typewriters were most frequently identified.

As for exterior accessibility, 85 percent of the buildings had at least one entrance at ground level and 70 percent had a ramp to aid wheelchair students in accessing the building.

As for interior provision, 49 percent had restrooms with side stalls and grab bars, 23 percent had extended handrails on stairways, and 23 percent and 31 percent had water fountains and telephones, respectively, accessible to wheelchair users.[22]

Summary

Research activities in various aspects of library services to blind and physically handicapped individuals do not appear to fit any particular pattern. Students enrolled in courses in master's degree programs which provide opportunities for research projects appear to explore a diversity of topics. In many instances, it is only at this level in library schools that research on services to blind and physically handicapped readers takes place.

Research activities outside the framework of coursework taken for the first professional degree are limited, to say the least, and seem to follow no particular pattern. Responses to the survey did not evidence an interest in any one particular segment of the handicapped population, on the part of persons in educational settings clustered within a particular geographic area, or on the part of faculty members as opposed to doctoral students or students enrolled in sixth-year degree programs. To some degree, research is being undertaken by faculty members or students in schools with well-established educational programs in services to handicapped persons or in related areas, for example, Wayne State University and the University of Wisconsin–Madison, or in schools which are in the process of building such programs, such as Florida State University and North Texas State University. (It should be noted that exceptions might be made to this statement, given the fact that all schools which were mailed questionnaires did not take part in the study.)

Conclusion

What of future research efforts in library services to blind and physically handicapped people?

In the past, an increase in the awareness by society as a whole to the problems of a particular segment of the population, the legislation drafted related to that subpopulation, and attempts made to raise the attitudinal level of the population have preceded an increase in educational and research activities in library services to that particular subpopulation. Within recent years, this has been true of library services to elderly people.

As legislation related to handicapped individuals begins to take hold and as handicapped persons become more visible and grow in political clout, making greater demands for services in general, and in particular for services to meet their informational, educational, and recreational needs, which must include library services, educational and research activities in library education settings will grow accordingly. This, however, is not going to happen unless library educators, students, and practitioners agree that libraries have a role to play in contributing to the community's positive attitude toward handicapped individuals. It is on this level that progress must first be won and without such progress, education programs and research activities within library education settings are not likely to be substantial nor are they likely to make sustained contributions towards assuring the existence of quality library services for blind and physically handicapped readers.

NOTES

1. Articles concerning the library's role in mainstreaming handicapped students may be found in *Exceptional Children*, *Journal of Learning Disabilities*, *Journal of School Psychology*, *Journal of Special Education*, and in *American Libraries*, *Library Journal*, *Library Trends*, *School Library Journal*, and *Wilson Library Bulletin*.

2. Readings on employment mainstreaming and its consequences may be found in *Journal of Rehabilitation*, *Rehabilitation Literature*, and *Rehabilitation World*.

3. Joseph A. Califano, U.S. Department of Health, Education and Welfare news release, 28 April 1977, p. 5.

4. Harris C. McClaskey, Introduction, *Institution Libraries*, *Library Trends* 26:301–305 (Winter 1978).

5. Eleanor Frances Brown, *Library Service to the Disadvantaged* (Metuchen, N.J.: Scarecrow Press, 1971), p. 137.

6. Genevieve M. Casey, "Library Service to the Handicapped and Institutionalized," *Library Trends* 20:364 (October 1971).

7. Merrillyn C. Gibson, "Preparing Librarians to Serve Handicapped Individuals," *Journal of Education for Librarianship* 18:121–130 (Fall 1977).

8. *Directory of the Association of American Library Schools: 1978* (State College, Pa.: The Association of American Library Schools, 1978).

9. Janet Silver, "Back to Academia: A Course on Library Service to the Handicapped," *Dikta* 2:176–177 (Winter 1977/78).

10. *Directory of the Association of American Library Schools: 1978*.

11. Vivian B. Swingle, "An Investigation of Large Print Publishing in Relation to Library Services for the Handicapped" (M.A. thesis, University of Chicago, 1978).

12. Rhonda Jo Vinson, "The Frequency of Representation of Handicapped Characters in Books Annotated in the 1976 Children's Catalog" (M.S. in Education thesis, Southern Illinois University, 1977).

13. George Garry Warren, "The Career of the Handicapped Librarian: A Study into the Effects of Physical and Psychological Barriers" (Ph.D. diss., Florida State University, 1978).

14. Cozetta White Buckley, "Media Services for Exceptional Students: An Exploratory Study of the Practices and Perceptions of Library Media Specialists in Selected Southern States" (Ph.D. diss., University of Michigan, 1978).

15. Judith F. Davie, "A Survey of School Library Media Resources for Exceptional Students in Florida Public Schools" [(Ph.D. diss., Florida State University, 1979)—Ed.].

16. Kenneth L. Ferstl, "Public Librarians and Service to the Aging: A Study of Attitudes" (Ph.D. diss., Indiana University, 1977).

17. Genevieve M. Casey, *The Ohio Cassette Book Project; An Investigation of User Satisfaction* (Columbus: State Library of Ohio, 1973).

18. [Published in abbreviated form as "An Application of Decision Making Theory to Curriculum Change in Library Education," *Journal of Education for Librarianship* 20:184–197 (Winter 1980)—ED.]

19. M. Doreen E. Fraser, "Roster of Observations about Programmes and Activities for Elders in Eight Western Europe and North American Countries" (Research completed at the School of Library Service, Dalhousie University, Halifax, Nova Scotia, and publication in progress, 1981).

20. M. Doreen E. Fraser to Kenneth L. Ferstl, December 11, 1978.

21. Margaret E. Monroe, *The Use of Print and Other Media in Nursing Homes of Wisconsin in 1975 (and A Related Survey of Public Library Service to Older Adults)* (Madison, Wis.: Library School and Faye McBeath Institute on Aging and Adult Life, University of Wisconsin, 1977).

22. James L. Thomas, *College and University Library Services for the Handicapped Student in Texas* (Denton, Tex.: North Texas State University, 1978).

Appendix A

1978 Questionnaire on Library Science Courses, Institutes, and Workshops in Service to the Handicapped

used by Merrillyn C. Gibson

Do you currently offer courses *specifically* concerned with library services to the handicapped? Yes____ No____

If Yes, please list course titles and ENCLOSE A DESCRIPTION OF CURRICULA

____

____

If you do not offer such a course, do you plan to do so in the future?
Yes____ No____

Do you offer any general courses, such as Public Library Management or Services to the Disadvantaged, which cover services to handicapped groups as part of the course curricula? Yes____ No____

Have you recently (within the past year) conducted institutes, workshops, or seminars on library services to the handicapped?
Yes____ No____

If Yes, please give description of program curricula for institute or workshop OR enclose a brochure.

____

____

Are you willing to conduct or sponsor institutes, workshops, or seminars about library services to the handicapped? Yes____ No____

Name____________________ Phone:____________
School__________________________________
Address_________________________________
____

Please return this questionnaire *as soon as possible* to: Merrillyn Gibson, Reference Section, National Library Service for the Blind and Physically Handicapped, Library of Congress, 1291 Taylor St. NW, Washington, DC 20542.

Appendix B

November 1978 Questionnaire on Research Activities on Various Aspects of Library Services to Handicapped People

used by Kenneth L. Ferstl

Current research studies in library services to the blind and physically handicapped:
Duplicate this form as necessary.
Name of investigator(s):
Title of study/project:
Beginning and projected ending dates of the study/project:
Funding source and level of funding (if readily available):
Brief description of the study/project. (An abstract may be attached to this questionnaire in lieu of statement describing the study/project.)

Retrospective research studies in library services to the blind and physically handicapped:
Duplicate this form as necessary.
Name of investigator(s):
Title of study/project:
Date of the study/project:
Funding source and level of funding (if readily available):
Brief description of the study/project. (An abstract may be attached to this questionnaire in lieu of a statement describing the study/project.)

( ) NO RESEARCH is currently being undertaken or has been undertaken by the faculty or student body of our library school.

Name of School: ______________________________
Location of School: ______________________________

Appendix C

Library Schools Responding to the 1978 Survey of Research Activities on Various Aspects of Library Services to Handicapped People

ALA-Accredited Schools

University of Alabama, Graduate School of Library Service
Brigham Young University, School of Library and Information Sciences
University of British Columbia, School of Librarianship
University of California at Berkeley, School of Library and Information Studies
University of California at Los Angeles, Graduate School of Library and Information Science
Case Western Reserve University, School of Library Science
University of Chicago, Graduate Library School
Clarion State College, School of Library Media and Information Science
Columbia University, School of Library Service
Dalhousie University, School of Library Service

Drexel University, Graduate School of Library Science
Emory University, Division of Librarianship
Emporia Kansas State University, Graduate Program in Librarianship
Florida State University, School of Library Science
George Peabody College for Teachers, School of Library Science
University of Illinois, Graduate School of Library Science
Indiana University, Graduate Library School
University of Iowa, School of Library Science
Kent State University, School of Library Science
University of Kentucky, College of Library Science
Long Island University, Palmer Graduate Library School
Louisiana State University, Graduate School of Library Science
University of Maryland, College of Library and Information Services
McGill University, Graduate School of Library Science
University of Michigan, School of Library Science
University of Missouri–Columbia, School of Library and Information Science
Université de Montreal, Ecole de Bibliothéconomie
State University of New York at Albany, School of Library and Information Science
State University of New York at Buffalo, School of Information and Library Studies
State University of New York at Geneseo, School of Library and Information Science
University of North Carolina, School of Library Science
North Carolina Central University, School of Library Science
North Texas State University, School of Library and Information Sciences
University of Pittsburgh, Graduate School of Library and Information Sciences
Pratt Institute, Graduate School of Library and Information Science
Queens College of City University of New York, Department of Library Science
Rosary College, Graduate School of Library Science
St. John's University, Division of Library and Information Science
Simmons College, School of Library Science
University of South Carolina, College of Librarianship

Southern Connecticut State College, Division of Library Science and Instructional Technology
Syracuse University, School of Information Studies
University of Texas, Graduate School of Library Science
Texas Woman's University, School of Library Science
University of Toronto, Faculty of Library Science
University of Washington, School of Librarianship
Wayne State University, Division of Library Science
Western Michigan University, School of Librarianship
University of Western Ontario, School of Library and Information Science
University of Wisconsin–Madison, Library School
University of Wisconsin–Milwaukee, School of Library Science

Non-ALA-accredited Schools

University of Alberta, Faculty of Library Science
Auburn University, Department of Educational Media
Bowling Green State University, Department of Library and Educational Media
Bridgewater State College, Library Science Department
Central Michigan University, Department of Library Science
Central Missouri State University, Department of Library Science and Instructional Technology
East Carolina University, Department of Library Science
East Tennessee State University, Library Service Department
Indiana State University, Division of Library Science
Kutztown State College, Department of Library Science
James Madison University, Department of Library Science and Educational Media
Memphis State University, Department of Library Service
University of Mississippi, Graduate School of Library and Information Science
Murray State University, Department of Library Science
University of North Carolina at Greensboro, Library Science/Educational Technology Division
University of Oklahoma, School of Library Science
University of Puerto Rico, Graduate School of Librarianship

Purdue University, Media Sciences Section, Department of Education
University of Rhode Island, Graduate Library School
St. Cloud State College, Department of Library and Audio-Visual Education
Sam Houston State University, Library Science Department
San Jose State University, Division of Librarianship
Shippensburg State College, Library Science Department
Southern Illinois University, Department of Curriculum, Instruction, and Media
University of Southern Mississippi, School of Library Service
Spalding College, Department of Library Science
University of Utah, Department of Educational Systems and Learning Resources
Western Kentucky University, Department of Library Science
West Virginia University, Department of Library Science
University of Wisconsin–Oshkosh, Department of Library Science

Appendix D

1980 Survey of Special Programs to Prepare Librarians to Serve Handicapped Students

Merrillyn C. Gibson

The National Library Service for the Blind and Physically Handicapped (NLS), Library of Congress, conducted a survey in October 1980 to determine which library schools in the United States that were accredited by the American Library Association (ALA) offered special courses, seminars, workshops, and institutes to prepare librarians to serve a handicapped clientele.

Each of the sixty-one ALA-accredited library programs in the United States as listed by ALA in March 1980 was surveyed. Twenty-six of the schools (43 percent) responded to the request for data. The results of those returns are summarized in Table 11–D1.

Seven out of the twenty-six responding schools (27 percent) offer formal and specialized courses of instruction to prepare librarians for

TABLE 11–D1

Survey of Special Programs to Prepare Librarians to Serve Handicapped Individuals

	Number of Schools	Percent of Total Schools	Percent of Responding Schools
1. Total number of schools surveyed	61	100	
2. Response to questionnaire	26	43	100
3. No response to questionnaire	35	57	
4. Formal Courses			
a. Presently offered	7		27
b. Planned in future	2		8
c. Not planned	17		65
5. Special Institutes	1		4
6. Workshops and/or Seminars			
a. Presently or recently conducted	4		15
b. None conducted but willing to sponsor	21		81
c. Not interested in sponsoring	1		4
7. Specialized Independent Study	2		8

serving physically handicapped readers. Such coursework includes the study of issues, library programs and services, types of media, and the special needs of serving physically handicapped readers. Schools reporting such programs are the University of Minnesota, Wayne State University, Florida State University, Southern Connecticut State College, the University of South Carolina, the University of Washington, and Kent State University. Two schools, Florida State University and the University of South Carolina, offer individualized planning of student programs to permit specialization in library services to handicapped clientele. These programs are made up of a series of courses, tutorials, research projects, colloquiums, practicums, and internships.

Fourteen of the responding schools (54 percent) reported that although they offered no separate courses in this area, the discussion of services to disabled library users was a part of other course offerings, such as courses on library services to adults, services to the disadvantaged, and public library management. Five schools indicated neither special courses nor discussion in general courses was offered. Two of these schools reported that although no special courses were offered and there was no discussion of library services to handicapped individuals in general courses, independent research projects were available for interested students.

Nineteen of the responding schools (73 percent) reported that specialized courses were not being offered. Of these schools, two (8 percent) indicated that plans were under way to offer specialized coursework in the future.

Seventeen of the responding schools (65 percent) which were not offering coursework at the time of the survey indicated that they had no plans to incorporate courses relating to library services to physically handicapped persons in their curriculum in the future.

One responding school (4 percent) reported offering a week-long specialized institute to prepare librarians to serve handicapped library users effectively. Instruction in this program consisted of lectures by appropriate guest speakers, films, demonstrations of equipment and aids, discussions of issues and problems, and an examination of existing facilities and services.

Four responding schools (15 percent) reported offering recent workshops, seminars, or colloquiums concerned with library services to physically handicapped readers. Twenty-five schools (96 percent) indicated that they would be willing to consider sponsorship of future workshops, seminars, or special programs. One school was not interested in conducting or sponsoring a workshop or seminar at any time. Twenty-two of these schools (81 percent) had not recently undertaken programming in this area. Six responding schools offer separate specialized courses but have not offered recent workshops, seminars, or special programs.

Since 96 percent of the library schools participating in the 1980 survey reported that they would be willing to sponsor workshops on library services to handicapped individuals, the workshop appears to be a readily approved technique for educating students and practitioners alike in this field of library science.

Part Four

In Other Countries

M. Joy Lewis

In recent years developments in the area of library services and related provision for blind and physically handicapped individuals have, increasingly, been a feature of library services to the public in the major industrialized countries. Levels of service vary considerably and are naturally linked to and dependent upon the standard of other types of provision for the general public, to institutions of higher and further education, and so on, in each country.

Frank Gardner observed in 1964 that library provision to hospital patients tended to exist in countries where there was either a developed public library service or a developed hospital service;[1] this trend has continued with the extension of the traditional service for patients in hospital to those groups in the community who are handicapped or disabled. Library services aimed specifically at physically handicapped individuals in the community are largely a product of the past twenty years. They were originally an outgrowth of service to patients in hospital and to housebound readers. In many countries, they are still inextricably linked organizationally with such services and rarely the subject of separate consideration.

In contrast, organized provision of library services for blind readers in many developed countries predated library services for hospital patients; in other parts of the world they developed together. The provision of reading material for blind persons, initially a nineteenth-century phenomenon, has accelerated in the twentieth century, so that most countries are now aware of the special reading needs of blind persons and make some provision. The last ten years have seen advances everywhere due to technological developments. Recognition of the difficulties faced by people with visual impairment other than blindness has, however, emerged only comparatively recently. In the past fifteen or so years, provision for categories such as the partially

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sighted has, in various countries, begun to be associated in some measure with library provision for blind readers.

A comprehensive review of library services to blind and physically handicapped people in all countries in the world outside the United States is clearly impossible within the confines of a single chapter. Nor does this writer, although having travelled extensively to other countries to see provision over the years, have a detailed or personal knowledge of all such services in every country, nor the linguistic ability to read accounts in the literature in languages other than English. Furthermore, a major piece of research into library provision for blind readers internationally was undertaken by D. E. Schauder and M. D. Cram, and published in 1977 as *Libraries for the Blind: An International Study*.[2] All those concerned with services to the visually handicapped are strongly advised to examine this study, since it deals with many aspects of organization and provision and is the most comprehensive account of the subject which yet exists.

The approach adopted here is one of compromise, whereby examples of services which are interesting or unusual, either in themselves or in the context of library provision in a particular country, are identified, although the description of a service in one country does not necessarily indicate the lack of similar provision in another. Inevitably it has been necessary to rely heavily on published descriptions of services, existing bibliographies and abstracts, particularly *Library and Information Science Abstracts*. One difficulty is that an account of provision may appear in the literature but subsequent alterations to that provision—its cessation or extension, for example—are often not recorded, or only briefly, in printed sources. For these reasons searching has been confined mainly to the literature of the past six years in an attempt to ensure reliability, but space has dictated a high degree of selectivity in describing services and therefore no claim at comprehensive coverage is made. The majority of descriptions are found in English language sources, although Scandinavian sources run a close second, and to some extent this reflects the emphasis internationally and the importance attached to such provision in different countries. Thus there is here a similar emphasis on developments in English-speaking countries and particularly on the British experience, which the author is familiar with and able to write of with some confidence.

National Surveys

Examination of existing provision—or its absence—has prompted major national surveys and reports where services to blind and physically handicapped readers are discussed, usually within the public library context, along with services to other categories of readers, such as hospital patients and prisoners.

In 1973, for example, a report sponsored by the Australian Library Promotion Council, *Library Services to the Disadvantaged: A Report to the Nation,* appeared. Its investigations revealed that 79 percent of new invalid pensioners (receiving benefits for the first time between 1969 and 1970) were under sixty years of age and suggested that a significant proportion of the population was disabled to such a degree that it was unable to make use of traditional library services. Services to blind individuals, it was suggested, urgently needed assistance or remodeling, and a recommendation was made that the state library should shoulder the burden borne for so long by the societies for the blind. (In support of this recommendation, reference is made in the report to the organizational pattern of the Library of Congress's National Library Service for the Blind and Physically Handicapped under its former name: Division for the Blind and Physically Handicapped.) Other recommendations relate to access to libraries and availability of special equipment for physically handicapped readers, and the researchers clearly felt that the need for action in the improvement of existing provision and implementation of new services was urgent on all fronts.[3] Subsequently, the 1975 report of the Australian Library Association to the Committee of Inquiry into Public Libraries, *It's All a Matter of What You Know,* included recommendations about services to the disadvantaged and had a reference to the report of 1973.[4] In 1977, the National Library set up a working party on library services for handicapped readers. During 1978 there was considerable activity, with first a national survey into library services for visually and physically handicapped persons being undertaken by the National Library on behalf of the working party, and secondly a seminar held in

August in Canberra, which was organized by the National Library of Australia in conjunction with the National Advisory Council for the Handicapped and gave opportunity for 101 people—librarians, representatives from government and voluntary organizations, and handicapped persons—to meet, listen, and discuss.[5]

In April 1979 the *Report of the Working Party on Library Services for the Handicapped* was published, including as an appendix the report on the national survey of March 1978. The report of 1979 makes several important recommendations regarding delivery of service, on a state basis; the role of the National Library with regard to such matters as the establishment of a union catalog of special materials for the handicapped; international interlibrary loans; copyright clearance; and the development of standards by the Library Association of Australia for library services to handicapped individuals.[6]

In England, the Department of Education and Science (DES) funded research into public library staffing, which was carried out by the Local Authorities Management Services and Computer Committee (LAMSAC) for the DES between 1972 and 1974. The final report, in three volumes, was published in 1976 and included a special report on the staffing of services to people who were hospital patients, housebound, or institutionalized.[7] This research was significant for its approach to library services in that all activities were identified and allocated a measurement of time, in decimal hours per week, arrived at from inquiry, observation, and experience, which enabled staffing needs to be calculated on a modular basis according to the activities undertaken. It was possible then to draw attention to the different aspects of provision and indicate the priorities which might be given, for example, in services for housebound and physically handicapped people. Unfortunately, financial restrictions which prevailed at the time of publication of the report, and an accompanying ministerial statement to the effect that the report's findings could not be used to enhance existing staffing levels, served to lessen the impact of the research, although some authorities have made use of the report to analyse their staffing situation.[8]

The Australian report of 1973 had a direct influence in Britain, where the DES's Library Advisory Council for England set up a Working Party on Library Services for the Disadvantaged in 1975.

The ensuing report, *The Libraries' Choice*, published in 1978, highlighted the deficiencies in services to hospital patients, handicapped and housebound individuals, prisoners, ethnic minorities, illiterate adults, and those in deprived areas, and recommendations were made for the enhancement of existing provision. Research into the attitudes and preferences of users of services to housebound and handicapped people; meetings between library authorities and other interested local authority departments and relevant bodies, such as those concerned with the blind; publicity outside the library of information regarding large-print books and aids, such as page-turners; and the importance of access for physically handicapped persons to and within library buildings—all are the subject of recommendations.[9]

A working party, similar to those in Australia and England, was set up in Norway in 1973 to study the supply of literature and public library provision for handicapped people. Its work was completed in 1976 and the findings, which have far-reaching implications insofar as library services for blind and physically handicapped individuals are concerned, have been described by Bjorg Heie, first secretary of the State Library Directorate. The report's proposals include a scheme to produce—with state support—30 large-print titles, 70 braille titles for sale and 200 for loan, 500 talking-book titles, and 35 color video programs (for the deaf) on an annual basis. Talking newspapers, as in Sweden, were felt to be the responsibility of the county library, with a target total of 30 talking newspapers to serve about 15,000 persons envisaged. A further recommendation was made that the four existing separate libraries for blind people and provision of talking books, video for the deaf, and other programs should be combined into one special library based in Oslo to serve the whole country, but it was also suggested that the county libraries should build up special collections of material for handicapped people. An interesting feature of this report is the financial costing of realizing its recommendations and objectives over a five- or alternative ten-year period.[10]

A National Library Task Group on Library Service to the Handicapped, organized in Canada in 1974, reported in 1976. The need for a national survey of library services, changes in copyright law, a union catalog of nonprint and special-print media, and development of a coordinated program of library service to blind and physically handicapped individuals was stressed. Already the National Library has followed the example of the United States by creating a Division for the Visually and Physically Handicapped.[11]

In Finland in May 1977, in a report to the minister of education, the Committee on Library Services to the Visually Handicapped made a number of recommendations, principally, that the state should take over financial responsibility for the Library for the Blind. The state grant was reported as 95 percent, with local authorities, through voluntary contributions, making up 5 percent. It was also recommended that the Library for the Blind should take over the preparation of tapes and braille from the Central Organization of the Blind and the Book and Tape for the Blind organization. Changes in the copyright law were needed so that all handicapped persons could make use of the facilities.[12]

These national surveys of services provide a context for the following specific examples of provision for visually and physically handicapped persons and also indicate the state of progress in five fairly representative developed countries and the level of official interest within them.

National Libraries

The need of blind persons to have access to a large stock and range of titles in a particular format, originally embossed literature (predominantly in braille but also, in some countries, in Moon) was the mainspring for the establishment of national libraries for blind readers in a number of countries, for example, in Britain, France, Germany, Sweden, and the United States, in the late nineteenth century.

Countries such as Japan and the USSR use a national library with regional branches (sixty-five in the case of Japan and sixty-nine in the USSR), whereas in countries such as Britain, East Germany, Israel, Italy, and New Zealand distribution is from a national center. Schauder and Cram have described, in greater detail and analysis than is possible here, the existing system—centralized or decentralized—in a number of countries, but the method of organization appears to be dependent largely upon the size of the country, the proportion of blind persons, and local and cultural variations within the population.[13]

Over the past decade, many national libraries have extended their service so that, although embossed books are still important and may be the major element in any stock, large-print books, talking books, and tactile materials may variously be made available to readers. Also, many countries include the partially sighted in provision made by national libraries. The United States pattern of combining library services to the blind and physically handicapped under one national umbrella organization (whilst generally admired and envied) is not always possible because the nature of funding of services, which in some countries has a charitable or voluntary foundation, or—as has been noted—copyright restrictions preclude it.

Denmark's State Library for the Blind incorporates the Printing House for the Blind. In an interview with the director in 1977 it was reported that the number of titles available was inadequate for the 6,500 borrowers but that financial limitations prevented expansion. A staff of three librarians performed book selection, assisted by twenty support staff. Stock consisted of a braille collection and 3,000 taped books (transfer to cassettes was in progress), and seven braille and thirteen tape magazines were produced, as well as talking newspapers and braille music scores.[14]

In 1979, Chief Librarian John Larsen addressed the (then) Libraries for the Blind Working Group of the International Federation of Library Associations (IFLA) on library services for blind and physically handicapped people in Denmark. He described the changes that had recently taken place, for example, the conversion since the beginning of 1979 to compact cassettes, which already amounted to 600 titles, in from four to forty copies, supplementing the former open-reel program, which had reached 3,700 titles at the time of the changeover. The use and supply of talking books for blind patients, in hospital libraries—a feature dating from the early 1960s—and for housebound readers would probably increase in the age of compact cassettes. Larsen looked forward optimistically to changes in library legislation which were expected to reinforce the obligations of public libraries toward blind and other handicapped persons.

Provisions for blind readers in the Netherlands, where it is estimated there are 20,000 visually handicapped persons, are based on four libraries (founded between 1884 and 1919), each of which produces and distributes braille materials, books and periodicals on tape and cassette (including technical journals), children's literature, and even pornography, if requested. Five other organizations have various roles in producing audiomaterial, talking periodicals, braille material, and study literature. The total stock of the nine in 1977 consisted of 45,564 braille titles, 33,978 talking-book titles, 34 periodicals in braille, and 107 talking periodicals. It has been estimated that braille materials were lent to 3,000 readers and recorded materials to 9,000 readers in 1976. Materials are available for loan to other than blind readers. Extension is to all whose ability to read is limited: visually and physically handicapped individuals, elderly people, and hospital patients. A union catalog of all braille and talking-book materials in the Netherlands is maintained at the Library for the Blind of the Amsterdam Public Library.

An interesting feature of the Dutch service is the Coordinating Center Foundation (Study Literature for the Blind Service), which was established in 1965. It has a coordinating role with other organizations and has as its aims the selection, production, cataloging, and distribution through existing libraries of study literature (other than music, which is supplied from another source) in suitable format for visually and otherwise handicapped individuals. "Book meetings" are held regularly with the other concerned library organizations to ensure adequate assignment of titles, and their production, for study purposes. In 1976 a total of 1,145 items—books, stencils, and photocopies, including correspondence courses for 80 students—were produced for some 420 persons. The range of subjects covered is wide, and students are urged to learn braille and not to rely entirely on taped material, which is not appropriate, for example, for the study of dead languages such as medieval Dutch or Old English. Difficulties also arise in the use of some foreign-language braille material from countries where a contracted braille is used, which necessitates a full transcription being made for the Dutch student. The Coordinating Center is subsidized by a 70 percent government grant, with the other 30 percent contributed by participants. Changes were expected in the Netherlands; the government intends to bring all the activities of the Libraries for the Blind, including the Coordinating Center's service, within one foundation.[15]

In the summer of 1980 the Netherlands Library for the Blind moved into new, spacious quarters. The brochure announcing this move gives information on the range of services available and states that the total number of items (books, volumes, and cassettes) annually lent had exceeded 3 million.

The 150,000 registered blind individuals in the United Kingdom are served by two organizations with responsibilities for library services to the blind population: the National Library for the Blind (NLB), established in 1882 as a charitable venture, and the Royal National Institute for the Blind (RNIB), established in 1868.[16]

The NLB formerly had a London headquarters and a Northern Branch, which served the five northern counties of England. Since it provides, primarily, a postal service, a London location was not seen as essential, and so in 1978 the NLB vacated its two separate premises and moved to Bredbury, near Stockport in Cheshire, where all its activities are now concentrated under one roof. The NLB has an extensive collection (350,000 volumes) in braille and a small selection of titles in Moon; it has about 6,000 members. Whilst the NLB itself produces most braille titles used in its service, it also purchases items in braille and in Moon from the RNIB, and in braille from the Scottish Braille Press. The services of the NLB are free to registered blind people, and, since 1965, as in all countries, items for blind individuals have traveled free through the post office mails (although the NLB had since 1958 in fact not charged its United Kingdom readers for postage).

In 1966 the NLB launched a new service consisting of a small collection of large-print books for the partially sighted reader—the Austin Books—produced xerographically in cooperation with University Microfilms. The collection consists of small editions of titles, primarily classics, unlikely to be in sufficient demand to be commercially viable in large print; it is intended as a complementary service to other large-print series, such as Ulverscroft. Austin Books can be borrowed from the NLB through public libraries.[17]

The RNIB, the other major national organization for blind persons in the United Kingdom, has many important activities in the fields of blind education and blind welfare, but it also has a significant role as a producer and publisher of books and magazines in braille (the only other braille publisher in Britain is the Scottish Braille Press) and in Moon, which it also supplies to libraries for blind readers abroad, in Canada and South Africa, for example. One of the most valued of the RNIB's periodical publications is its braille version of the *Radio Times,* a national weekly publication detailing all BBC television and radio programs, which is free to registered blind individuals. The RNIB also maintains a tape library for students, with over 4,600 titles available, and a students' braille library of about 52,000 volumes. The Vernon Committee Report, *The Education of the Visually Handicapped,* says that the RNIB is contributing 100 to 150 titles, in multiple copies, each year, in addition to the 1,000 or more titles which are being added to the Students' Braille Library. Comparison with the 30,000 new editions and titles of printed books published in Britain each year[18] clearly illustrates a problem that is experienced everywhere: the impossibility of providing reading material for visually handicapped people on an equivalent basis with the normally sighted. With St. Dunstan's, the RNIB administers a talking service, which will be described later with other similar services.

Some countries came late to providing a national library service for the blind. For example, Poland's Central Library for the Blind started in 1952. Growth is reported to have been slow with, in 1967, about 23,000 books, including large print.[19]

In India, the Delhi Public Library established a braille department in March 1963—the first Indian public library to do so. The collection in 1974 consisted of 5,000 braille volumes in Hindi and English, together with the basis of a talking-book collection with 5,000 long-playing records and audio equipment.[20]

Reference has already been made to the large number of regional libraries in Russia and Japan. A 1974 Japanese account is critical when it states that 17,822 blind individuals in Osaka's Prefecture have only seven libraries with services for them. The same writer suggests that blind readers should not come under the Welfare Ministry but should be the responsibility of the Social Education Department of the Ministry of Education. Blind individuals are 7–8 percent of Japan's total population, and visual handicaps are increasing in incidence. Of those who might use it, only one-fifth can read braille. The writer stressed that more public libraries should supply services such as reading-aloud provision, translators, braille signs, and magnifiers.[21]

Provision in the USSR is extensive, with sixty-nine regional libraries distributing a service to the blind through branch libraries, bookmobiles, postal delivery, and domiciliary services. The Republican Central Library for the Blind has inaugurated research into blind readers and guidance in reading, the rational selection and efficient use of stock, the organization of work, and the library as a compensatory factor for loss of vision, with sound montages provided as art.[22]

An article published in *Unesco Bulletin for Libraries* in 1965 may be out of date in some respects, but it does provide a very comprehensive picture of library provision for blind people in the Soviet Union. The size of the country and its population mean that provision for blind readers is equally on a large scale with a vast output of braille and talking books. Reading aloud to blind individuals from normal-print sources, such as books and newspapers, seems to be a more common activity in the USSR than in western Europe and is described as occurring in libraries, places where blind persons work, in schools, and in the homes of blind invalids. Literary evenings and group discussions on books which are read aloud are popular and help to bring blind persons into the sighted community. Competitions in reading braille are held, as in Britain, to encourage the learning of braille. Use is made of bas-reliefs and sculpture in libraries, and book exhibitions are accompanied by explanatory information in braille.[23]

Large-Print Publishing

As long ago as the 1880s special large-print books were produced in Germany for children with "weak sight." The needs of the adult reader with failing sight were neglected everywhere because of the emphasis on provision for the blind person and also because medical opinion, even into the 1930s, favored the preservation of residual vision. Since then attitudes have changed and medical advice is concerned with encouraging use of the sight that exists, in most cases.

The economies in the use of paper necessitated in many countries during the Second World War, and for some years after, may have contributed to a decline in the size of print used (and acceptance of falling standards by the general public), and this, together with a decline in the quality of paper, may have exacerbated reading problems for those with visual difficulties.

The (British) Library Association (LA) established a subcommittee, Books for Readers with Defective Sight, now the Panel on Reading for the Visually Handicapped, in 1960, with representatives from other professions. It set about collecting information on aspects of the problem of large-print publishing. In response to a government circular of 1963 which alerted welfare authorities and voluntary bodies to the problems of the partially sighted and particularly asked that libraries set aside large-print books for those with defective vision, the subcommittee intensified its efforts. Lists of books in larger-than-average type had, over the years, been compiled by various public and hospital librarians in response to a demand by readers, and the LA published a composite list. Many of the titles listed were no longer in print, but it was considered that they might be found in public libraries or be available from second-hand sources. After much deliberation and investigation, a pilot survey of potential public library demand for specially produced large-print titles was undertaken early in 1963, and subsequently a decision was made to proceed with a pilot project of publishing books with the type enlarged by a xerographic process, with a grant obtained for this purpose from the Nuffield Auxiliary Fund.[24]

As final plans were in progress, the LA subcommittee learned of the intention of a retired publisher, Frederick Thorpe, to embark on a commercial venture of large-print books intended for those elderly people whose sight was failing. The result was the publication of the Ulverscroft Books, and the LA decided to support Thorpe instead of publishing titles in large print. The first Ulverscroft titles were produced in 1964. Now not only is it the world's longest running large-print series, with well over 1,000 titles to its credit—bought by countries all over the world where English is read—but also it has led the way for similar large-print developments in Britain and abroad.

Large-print books have since been produced in Belgium, Denmark, France, West Germany, Italy, the Netherlands, Sweden, and the United States. One large-print publisher in the United States has also recently launched a series of titles in Spanish. A resolution made at the meeting of the IFLA's Libraries in Hospitals Sub-section in 1969 that a list of large-print publishers throughout the world be produced has not yet resulted in the publication of such a list. Many public libraries in Britain produce lists in large type of large-print books in their stocks and the Disabled Living Foundation in London maintains a card index of large-print books for inquirers. The LA also supplies information on large-print publishers and other associated developments and has produced *Reading for the Visually Handicapped*, a leaflet in large print now in its third edition, which is intended for use by readers, as well as librarians, and gives information on a wide range of services for the visually handicapped reader.[25]

The success everywhere of large-print books has led to other developments. In Britain a monthly newspaper in fairly large print for the elderly, called *Yours*, is produced by a national charity called Help the Aged. It acts as a vehicle for news items and information of interest to the older age group. A weekly large-print newspaper, *Age*, has been published in Melbourne, Australia; and in the United Kingdom, *Foresight*, a weekly national large-print newspaper started publication in 1980. The British Broadcasting Corporation (BBC) does not publish a large-print edition of *Radio Times*, nor does it include in that publication details in large print about radio programs. The BBC has a weekly radio program for visually handicapped individuals, *In Touch*, and a book by the same name, now in a revised edition.[26] There is also a weekly BBC radio program called *Does He Take Sugar?* concerning physical handicaps, and a variety of similar programs appear on both BBC and independent television. The program entitled *In Touch*, gives frequent publicity to such matters as library services for the visually handicapped and large-print developments.

The LA has mounted three conferences on aspects of provision for the visually handicapped at which problems of print have been regularly under consideration. Delegates have represented all spheres of interest and the conferences have offered a forum for common problems and joint discussion. What was described as "the menace of small print" was a focal point of its conference in 1971 and the need for the elimination of small print in such items as official forms, insurance documents, and information on containers was stressed.[27]

The problems of visually handicapped readers have occupied the LA in recent years. With permission it diverted use of the grant from the Nuffield Auxiliary Fund to initiate research into the print needs of the partially sighted and published Alison Shaw's report, *Print for Partial Sight*, in 1969. This research established details of design such as size and weight of type, and, to a lesser extent, type face and type spacing, as significant factors in legibility in printing for the partially sighted.[28]

The LA, concerned that research should continue, obtained a grant in 1977 from the British National Bibliography Research Fund for a large print user study. Lorna Bell, a Chartered Librarian, was appointed research associate. Her report, *The Large Print Book and Its User*, was published in 1980. By means of four parallel surveys, her study included a description of the readers of large print, their knowledge of services, the effects of different library policies and practices, reasons for nonuse of services, and the role of "link" people in conveying information about these services.[29]

It is clear that the visually handicapped reader can never be completely provided for, if provision is limited to embossed type and large-print material. There will, probably, always be a need for large-print material because, for some, there is no substitute for the printed book as a reading medium, and because of the convenience in handling it offers. However, many who are partially sighted find large print difficult to read, even with magnifying equipment, and the majority of those classified as blind cannot use large-print material at all. Yet it is known that many elderly blind people—and the elderly constitute the majority of the blind population—have difficulties in, or a resistance to, learning to use embossed material such as braille, difficulties described in the literature of many countries. Fortunately, there are alternatives to both the print and the embossed book for those with visual problems.

Recorded Materials

In Britain the impetus for research into the possibilities of recorded books sprang from the number of servicemen blinded as a result of the

1914–18 war. Fifteen years were spent in investigating the problem until a satisfactory system was devised and launched in 1935 through a service administered jointly by the RNIB and St. Dunstan's, an organization concerned with the welfare of war-blinded members of the British armed forces. Over the years, first as the Nuffield Talking Book Library, and now as the British Talking Book Service for the Blind, there has been a program of continuous development and revision. Originally, special discs were used but the development of magnetic tape revolutionized provision all over the world and led, in 1959, to use by the RNIB of tape enclosed in a cassette. About 3,400 titles are available. Because of arrangements made with the Publishers' Association to protect copyright, the RNIB has never used open-reel tape although in many other countries open reel has been, and in some countries still is, used in services for blind readers. The RNIB has continued research into new techniques and, in 1967, in association with Clarke and Smith Industries, it developed the improved playback machine and cassette which are currently in use. It is a system since adopted in Australia, Finland, Spain, and Switzerland (Zurich), although other countries, such as Canada, Denmark, France, most German-language countries, the Netherlands, Norway and Sweden, have decided to use the Philips compact cassette system, primarily, it seems, because it offers compatibility with commercial cassette equipment.[30]

In Sweden, talking books were recorded on tape first by the Association of the Blind in 1955 and, at the same time, also at the Malmö Public Library, on the initiative of City Librarian Ingeborg Heintze.[31] Other public libraries followed the Malmö example, but these days their participation tends to be confined to recordings on matters of local interest, or in dialect. The two main producers of talking books in Sweden now, Bibliotekstjanst (Btj)—the Swedish Library Bureau—and the Association for the Blind, enabled readers to borrow more than 100,000 talking books from the Association for the Blind in Stockholm, and 150,000 from public libraries, in 1971.[32] Investigation was undertaken in Sweden into the advantages of adopting the equipment developed by Clarke and Smith in Britain, as Finland decided to do, or the Philips compact cassette. A number of factors were taken into account, including sound quality, playing time, index equipment, and the availability of duplicating machines. The Swedes decided to adopt the Philips compact cassette because of the possibility of using commercial material in the future and the need for equipment which would allow use of commercial material. Ulla Cahling wrote in 1970: "We are also thinking of the international exchange of talking books and periodicals, which is as yet restricted for our part to the Scandinavian countries and Western Germany. The English-speaking world is closed to us for two reasons: one, practical and technical; the other formal and legal. The former barrier we can do something about, the other is beyond our control."[33] Sweden's blind and partially sighted people are entitled by law to a tape recorder, free of charge, whereas in Britain there is a small rental charge for the recorders supplied by the RNIB, although in practice the social services departments of most British local authorities meet this cost for individuals. Under Swedish law, not only the approximately 15,000 registered blind and partially blind persons, but also those whose eyesight is so weak that they cannot read normal print and those disabled persons who have difficulty in holding books may also borrow talking books.

Sweden has a record of activity on behalf of all categories of disadvantaged individuals in society. Its library services to the blind population date from 1885, and, in 1958, Brita Arborelius, a discerning hospital librarian knowledgeable about experiences common to hospital librarians in other countries, noted that there were few books in large print for old people and for patients with defective vision and that Svenska Diakonistyrelsen had published the four Gospels in large print.[34] (In fact, in many countries large-print versions of the Gospels were the only large-print items available at that time.) But it was not until 1969 that large-print books began to be produced in Sweden. Btj has since produced a list of large-print books: some 270 in 12-point type or larger.[35]

In Britain, membership in the British Talking Book Service for the Blind is confined to those who are registered blind individuals or who can produce a certificate from an ophthalmologist specifying that they cannot read normal print. About 50,000 people use this service.

A recently established British organization, Calibre (Cassette Library for the Blind and Handicapped), provides a taped-book service of fiction and nonfiction on ordinary, standard cassettes capable of use with commercially available equipment. Originally only children's titles were available, but since 1976 adult titles have been added to the collection. Membership is open to those who can produce evidence from a doctor certifying their inability to use printed books in the normal way. Other organizations which provide recorded material for physically handicapped individuals will be described later with other services for this population.

The opportunities opened to the visually handicapped individual in having reading material available in recorded form has led to an increased interest in reading and has also attracted many former nonreaders.

One development which has had a significant effect on the availability of current news and information to the visually handicapped has been the spread of talking newspapers and talking periodicals. In the literature, particularly from non-English-speaking countries, the distinction between talking newspapers and talking periodicals or magazines is not always clearly defined and in accounts there appears to be some overlap. Perhaps the distinguishing feature may be seen as one of content. The emphasis of the talking newspaper is primarily on items of local interest and the record is not usually permanent—cassettes are normally erased after an issue ceases to be current, and reused. The talking periodical or magazine is usually concerned, although there are exceptions, with the recording of existing commercial publications on tape or cassette and often are more permanent.

Talking newspapers were pioneered nationally in Sweden where they are distributed by some thirty-seven county libraries. Ronald Sturt, a librarian with a record of concern and involvement with library services for handicapped persons and then a lecturer at the College of Librarianship in Wales, observed the Swedish system on a visit in 1968. He was so impressed that he subsequently initiated a similar service in the United Kingdom. His success in translating ideas into action was demonstrated in the launching, in January 1970, of a bilingual talking newspaper in Cardiganshire, Wales.[36] Since then the growth of talking newspapers in Britain has been phenomenal with 8 by 1974 (the year the Talking Newspaper Association of the United

Kingdom—TNAUK—was founded, with Ronald Sturt as chairperson), 38 by 1975, 66 by 1976, 187 by 1977, and 250 by 1978, including 7 or 8 existing or in process in Northern Ireland.[37] By 1979 the number had increased to over 300. The newspaper is usually produced weekly and consists of material such as news, features, and interviews, all predominantly with a local flavor, together with information of particular concern to visually handicapped people. The recording is normally carried out by volunteers. TNAUK coordinates information on talking newspapers and offers advice and assistance in establishing new ones.

From Sweden has been reported an experiment by one national newspaper—*Nerikes Allehanda*—in which a selected group of blind and invalid people received an hour-long cassette, every day over a two-week period, summarizing the contents of the newspaper.[38]

Talking periodicals appear to be distributed in a number of countries, Canada, Britain, Denmark, the Netherlands and Sweden, for example. In Britain, Clarke and Smith have begun to produce periodicals on their long-playing cassette equipment and have chosen *Reader's Digest* as the first title to launch National Talking Magazines.

Other developments which may be briefly mentioned include the investigation of the special needs of visually handicapped children. A Canadian article, in 1971, identified some sixty-five titles of special use to children with limited vision and described the characteristics and features to look for in selecting such items.[39] A paper presented at an IFLA meeting describes how one Italian institution, the Italian Library for the Blind at Monza, is encouraging blind children in the use of braille, which the librarians feel will always be a format for blind readers. Readers are encouraged to purchase their own braille books, which are available through subsidy at the same price as the equivalent print version.[40] What has been described as the world's first printed picture book for blind children, with abstract illustrations printed on cardboard in relief or raised type, was pioneered in Denmark in 1977. It was reported then that English, French, and Dutch versions were in preparation, that the first 20,000 copies would be on sale early in 1978 in Austria, Germany, the Scandinavian countries, and Switzerland, and that UNESCO was promoting the book during its 1979 Year of the Child. It differs from other attempts to produce picture books for blind children in that it is available at ordinary bookstores. This publication, *What's That?* by Virginia Allen Jensen and Dorcas Woodbury Haller, is for preschool children and combines a printed text with textured pictures enabling sighted and sight-impaired children to share a reading experience. A second title, by Virginia Allen Jensen, *Red Thread Riddles*, on the same lines, has the text in braille as well as large print.[41]

The library and information needs of visually handicapped students, with special reference to students at British universities, were the subject of research for a master's degree at Sheffield University,[42] and the special needs of *all* handicapped students in universities and polytechnics in the United Kingdom are receiving detailed study in these institutions.

Technological Developments

The contribution of electronic engineering to provision for blind people has accelerated over the past few years, particularly with the growth of computer technology. Work in the late nineteenth and early twentieth centuries through to developments in the years following the 1939–45 War was summarized in a 1964 paper by P. W. Nye, of the National Physical Laboratory in England.[43] Development is so rapid and subject to change and expansion that here only some significant features are noted.

In Israel, the Transicon—which converts print into braille—was first demonstrated in public in 1972. (It has since been renamed the Textobraille.) The machine embosses six-dot braille on moving paper tape and, though wired to read English and provide English braille, has been designed to distinguish all the characters used in Danish, French, German, Italian, Norwegian, Spanish, and Swedish and, with minor modifications, can be wired to produce braille in those languages. Maximum continuous reading speed is said to be 120 words per minute. One disadvantage is that it is limited in use to the braille reader.[44]

The American Kurzweil Reading Machine, which translates the printed word into electronically manufactured speech, has been tested in England by the National Physical Laboratory and has undergone trials by the RNIB and St. Dunstan's.

The Optacon, developed in the United States, electronically produces a tactile "image" from normal print. One writer reported 110 are in use in the United Kingdom.[45] In British tests, a senior braillist at the RNIB, after nine months' training, achieved a speed of only 25 words per minute compared with his braille reading speed of 150.[46]

Research into computer brailling is proceeding in Britain, Japan, and the Netherlands. The advantages are many, perhaps most notably the reduction in worker hours, in specialized personnel needed to produce items, and in size of items stored in comparison with normal braille volumes. Computerization has also been used in Britain in the experimental production of embossed maps to increase blind mobility.[47] Research into many aspects of visual handicaps is continuing at the universities of Manchester, Warwick, and, notably, at Birmingham in the Research Centre for the Education of the Visually Handicapped.

An experiment in closed-circuit television (CCTV) was carried out in Denmark's Frederiksberg Public Library from January 16 to February 28, 1978, in the Reference Department.[48] It was set up in order to establish whether improvements in reading by visually handicapped people could be achieved by the use of CCTV compared with other optical aids and how far those unable to use print at all could benefit from CCTV. The equipment, already installed in some Swedish libraries, although no accounts have appeared in English concerning their use, was Swedish. Basically, the equipment consists of a video camera and a special television screen onto which an enlargement of text scanned by the camera is transferred electronically. Enlargements in a range of six to forty times are possible. The results of the experiment were positive: some readers, for the first time in years, could read letters from relatives or view family photographs; 90 out of 106 who had formerly not been able to make use of printed information managed to do so and after a relatively short period of instruction; 52 out of the 90 said they would like to use CCTV if a permanent feature in their local library.

In Britain, the Library Association, in cooperation with the library authority, set up a CCTV experiment in the Central Library of the London Borough of Kensington and Chelsea, in conjunction with the advice of a consultant ophthalmologist in 1979. A six-month period of monitoring the experiment was made possible on receipt of a grant from the British National Bibliography Research Fund. The results proved similar to the Danish experience. In 1980, a CCTV was installed in the North Library Reading Room of the British Library and also at Harborne Public Library in Birmingham, which was the first public library to install a CCTV on a permanent basis, although other authorities have the matter under consideration.

A prototype reading aid for the partially sighted, developed by Philips in the United Kingdom, is said to retain some of the advantages of CCTV but cost less. It has been researched and tested with partially sighted people, but its limitations include a lack of the flexibility possessed by CCTV. For example, it cannot be used to read handwritten documents. However, no plans existed for a production model of this aid.[49]

The Foundation for Audio Research and Services for Blind People, a British organization formed in 1976, outlined its latest development in November 1978. The use of special recording techniques and equipment enables the recording and duplication of up to twelve hours of high-quality reading on a standard compact cassette normally used for ninety minutes of reading time. Modules would make it possible for books to be read in a half to two and a half times that of the original recording. Full-length audiobooks in a single compact cassette thus become a commercially viable proposition. Whilst the product is not yet commercially available, the foundation is seeking financial support to develop and market it. The "scanning" which the sighted take for granted will thus be accessible to those without sight. The foundation has an Express Reading Service, based at its Taporley Recording Centre, and those blind and visually handicapped people with access to the service, unfortunately limited in number by resources, can send print materials to the centre and have up to two hours of recording made and returned within twenty-four hours.[50]

At the 1979 meeting of IFLA's Round Table of Libraries for the Blind, delegates heard of an exciting new development: for a six-week trial period, a small group of blind people in Gothenburg, Sweden, had been receiving the morning newspaper, *Goeteborgs Posten*, through their telephone. By a link with a small computer terminal, the text of the newspaper was printed in braille onto a cassette recorder in the blind person's home. Thus the taped newspaper was available six hours before the sighted reader had an opportunity to read it.

Specific provision for the physically handicapped reader is not so well developed in most countries as provision for the visually handicapped reader. Many countries have legislation similar to that in Britain, where the Chronically Sick and Disabled Persons Act 1970 requires the provision of library facilities and physical access to public buildings, such as libraries, for those covered by the act. In this connection, Selwyn Goldsmith, whose research has been invaluable in guiding those planning for disabled persons, must be mentioned.[51] The extent to which such provision is made in different countries differs widely, is often not mandatory, and may depend on the government or local authority's resources, generosity, or whim. The most common form of provision for physically handicapped readers takes the form of a housebound-reader service. The increase in the proportion of elderly people in the population of many countries (14.0 percent of the total population in England and Wales; 17.5 percent in Czechoslovakia)[52] has led to a corresponding growth in such services. Accounts in the literature tend to be very similar in every country. They are largely descriptive of the need for and the problems in establishing and staffing a service, together with surprise at the success of, and appreciation for, the new venture. The writer undertook a study, *The Elderly Reader*, as a research thesis for Fellowship of the Library Association (FLA), in the early 1970s[53] and, in 1979, taught a two-semester course in a part-time degree course on public library services to the elderly. It is clear that more research on this important subject needs to be done.

The revised UNESCO Public Library Manifesto and the firm recommendations in IFLA'S *Standards for Public Libraries* may have helped to initiate services in some countries.[54] At the end of 1978 the LA issued a consultative document (reissued in 1980) called *Guidelines for Libraries in the Health Service*, which includes service to the patient at home.[55] This document has been discussed widely among organizations and interested bodies. In 1980 the LA issued a policy statement, *Library Support for Health Care Services*.[56]

As has been said, there is agreement amongst librarians in many countries that provision, such as taped services, for blind readers should also be made available to physically handicapped individuals. But often there are legal barriers to this extension of services, in the form of copyright law or the nature of financial bequests or funding. In Britain, attempts to form an umbrella organization to provide talking books to people with all categories of handicaps were unsuccessful. Thus, there exist, in addition to the provision for blind readers, two other major services: the British Library of Tape Recordings for Hospital Patients, which began in 1960, and the National Listening Library, which provides a cassette service of books for physically handicapped individuals and which was established in 1972 by the merging of two discrete services.[57]

The enormous expansion in the number and variety of taped recording services in the United Kingdom led Catherine Ireland to carry out a systematic study of those which were available. The published result of her FLA thesis study is the most comprehensive directory of existing taped services in England and Wales.[58]

The need of physically handicapped people for reading aids, such as page-turners, bookstands, and recumbent spectacles, first became apparent in library services to hospital patients, and it is in the professional literature of that specialty that information and illustrations of equipment are mostly found, for example in Britain, Finland, and Sweden,[59] although many countries also have national organizations which issue detailed information about aids. In Sweden a leaflet describing some aids for the handicapped may be found in most post offices, so the general public becomes aware of what exists. In Britain, one publication, *Communication*, comprehensively identifies and illustrates writing and reading aids and is part of a series of publications of aids to daily living, under the title Equipment for the Disabled.[60] Research into the comparative efficiency of a wide range of page-turners,[61] microfilm projectors, and prismatic spectacles was carried out by the Research Institute of Consumer Affairs in 1969,[62] and Alison Shaw undertook an investigation into writing and reading aids for the physically disabled in 1970.[63] A British standard for book holders, magnifiers, and prismatic spectacles was produced in December 1973, on the instigation of the Library Association's Hospital Libraries and Handicapped Readers Group, which had become concerned at the duplication of aids and the apparent lack of standards.[64] IFLA's Libraries in Hospitals Sub-section, with cooperation from its representatives in some member countries, published its *International Directory of Technical Reading Aids* in 1975.[65]

One title, with an emphasis on British and American services, *Outreach*, by Gerald Bramley, covers library services for blind and partially sighted readers in addition to discussing services for disabled, elderly, mentally handicapped, and deaf populations. It may be a useful source to fill out details of services inevitably described briefly here.[66]

Another title, which was received for review as this manuscript was in the final stages of preparation, deserves mention here: *Libraries and the Handicapped Child*, by Margaret R. Marshall, who has considerable experience and expertise in this field. Her book covers much of the same ground as this chapter, in greater detail than is possible here, but with emphasis on the child. Marshall has traveled in some twenty-one countries, and her publication reflects this international experience in her descriptions of different library services in various parts of the world. This is an important publication as it contains information on services which has relevance for all librarians concerned with handicapped people, not only those with specific interest in services to children.[67]

In the preparation and revision of this paper, the writer has become more than ever aware of the unevenness of provision and the lack of documentation. An effort to verify the size of the braille stock in one important collection, for example, produced a different figure from each of three reputable sources: 2,500, 8,000, and 34,000 volumes. It was decided to omit any reference to the size of the stock, but this is one example of the difficulties in presenting an accurate picture of provision.

Whilst it must be noted that the designation of 1981 by UNESCO as the International Year of Disabled Persons has resulted in increased reporting of services—existing and planned—and a new attention to such provision, it has, unfortunately, coincided with a period of financial recession in many countries.

As an Australian reviewer of Schauder and Cram's *Libraries for the Blind* noted, the book "supports the arguments and need for cooperation and the involvement of the professional librarian and the community."[68] Perhaps, with *real* involvement by *all* countries through IFLA's channels it may be possible to achieve the necessary cooperation and involvement on an international scale.

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International Cooperation

Frank Kurt Cylke

When the Library of Congress was given a congressional mandate in 1931 to provide a national library service for blind adults, there was a plethora of service concepts and technology at home and abroad on which to build. Braille production was modeled on European as well as American precedents. Talking-book machines were built and modified using British as well as American technological developments.

In addition to adopting and adapting foreign technical developments, the Library of Congress program continued the practices of the Library of Congress reading room for blind individuals, which had a modest record of international cooperation. It sporadically worked out bilateral arrangements for the reciprocal purchase, loan, or exchange of materials and its staff exchanged visits with librarians from other countries.

Between the mid-40s and the early 1970s, international involvement of the Library of Congress program's staff could be described as desultory. In the 1940s and 1950s surplus and duplicate books were made available to the American Foundation for the Overseas Blind and to the State Department, which had requested materials for the East African School for the Blind in Thiba, Kenya, and for the U.S. Library in Cairo. Braille and talking books were procured for Great Britain, international journal articles and report literature were reviewed for information, and two staff members represented the Library at international conferences of the World Council for the Welfare of the Blind. In reporting on the possibility of developing relationships with library organizations outside the United States, neither representative saw any benefit to the Library of Congress in international involvement.

That attitude has changed.

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It has been estimated that 75 million people throughout the world cannot read printed materials because of blindness or other physical handicaps. But the quantity of materials produced in special format for them is never more than a small fraction of the world's print output. A recent survey in Denmark showed that visually handicapped readers there had access to only about 2 percent of the fiction and poetry published in print. Today the National Library Service for the Blind and Physically Handicapped, the Library of Congress (NLS), mass-produces about two thousand book titles a year and volunteers produce an additional eight hundred titles for NLS in single copies or limited quantities; in contrast, the United States produces each year about forty thousand new commercial book titles in standard print, approximately the total number of separate titles generally available in braille, recorded form, or large type through the Library of Congress program after fifty years of service. The quantity of materials produced in special format in any single nation is inadequate to serve the professional, educational, informational, and cultural needs of its handicapped readers, who are therefore disadvantaged in their attempt to lead full, active, and independent lives in society.

At the same time, legal and technical barriers prevent libraries from fully sharing their collections internationally, and duplication of effort occurs among producers of special-format reading materials in various countries. At times the Library of Congress has learned that another English-speaking country was planning to produce a work already brailled or recorded for its own NLS collection. International sharing of materials allows the other country to produce a work neither library owns and both benefit. Similarly, duplication of effort exists in research and development, resulting in redundant or incompatible products. Or a library working in isolation may make a technological advance or institute an innovative service which is not adopted by other countries, which are simply unaware of it. This lack of cooperation represents an unconscionable waste of scarce resources.

National and international organizations devoted to the welfare of blind people have played a significant role in matters relating to reading materials for handicapped people. However, the primary thrust of their activities has been toward the production of materials rather than the library functions of acquisition, storage, and retrieval of information.

International approaches to the improvement of library services to the handicapped population are best addressed by an organization of librarians such as the International Federation of Library Associations (IFLA), rather than by organizations devoted to the welfare of the blind. The production and dissemination of materials in special formats such as braille and audiotape are a responsibility usually assumed by a nation's charitable or governmental agencies. Regardless of organizational structure, such libraries function within the broad scope of the library and information science community. Library service for handicapped people has the same philosophical base as that for nonhandicapped people. Many of the service and technical approaches are identical; those not identical are quite closely allied. Although providing appropriate library material for blind and handicapped people has necessitated the use of mechanical, electrical, and electronic engineering disciplines, the medium selected must relate to service and library philosophy.

Yet, historically, international library organizations have not concerned themselves very much with this field. Donald Schauder and Malcolm Cram found in 1976 that "IFLA and other international library bodies have been less active than might be expected in the field of library service to the blind." They remarked that "perhaps IFLA's most notable contribution was made at its 1953 conference in Vienna where certain members of the public library section were asked to consider the international aspects of the talking book."[1] But by 1976 the Library of Congress had already initiated discussions about establishing the first international organization of libraries for handicapped readers.

In 1977, as director of NLS and with the assistance of Karen Renninger, former assistant chief of the NLS Network Division, I formally proposed that IFLA serve as the coordinating body for the development of international technical and service guidelines in library services to blind and physically handicapped people. As a result, that year a Working Group on Libraries for the Blind was established under what was then the Hospital Libraries Section of IFLA. This group became the IFLA Round Table of Libraries for the Blind and has met annually since 1977. After serving as chairperson for the first two years, I became executive secretary in 1979. By 1981, ninety countries were represented.

The Round Table has defined two prime objectives. One is encouraging the establishment of library services to handicapped populations in countries where it does not exist and expansion of service where it does. The other is removing the major obstacles to the free international flow of special-format materials; such obstacles include inadequate bibliographic control, nonstandardized formats, cumbersome copyright restrictions, and unfavorable postal laws and customs regulations.

With regard to developing countries, the Round Table has taken several steps to help improve library services to handicapped people. Since 1979, two libraries have paid both IFLA dues and travel expenses to IFLA meetings for a different developing country each year in order to assure its active participation. The Round Table also encourages its members to assist in finding support for library services in developing countries. Through their efforts a librarian from Africa has received a Martinus Nijhoff Study Grant. Two African librarians have been invited to an IFLA presession seminar to share information.

In June 1980, the Round Table and the World Council for the Welfare of the Blind (WCWB) sponsored a two-day seminar in Washington, D.C., for the purpose of setting up a cooperative production facility and exchange program in Latin America. Participants included Costa Rica, Panama, Brazil, and Spain. The seminar decided to establish a central audio production facility in Brazil which would produce 100 titles annually beginning in January 1982, half in Spanish and half in Portuguese. Other subjects discussed were braille production, gift and exchange programs, postal and customs regulations, service patterns, and the standardization of talking-book formats.

In November 1980, the Round Table conducted a three-day bilingual seminar funded primarily by UNESCO for representatives of twelve African countries, in Arusha, Tanzania. The purpose of the seminar was to promote interest in library services to visually handicapped people, to share information, and to suggest ways of developing an extended library service. At the end of the meeting, the seminar's first-priority recommendation was establishing a national braille press in each participating country and producing braille educational materials, as well as increasing access to existing materials through interlibrary loan nationally and internationally. Although the lack of playback equipment is a problem, the seminar also recommended establishing talking-book production facilities. As a result of the seminar, IFLA asked UNESCO to incorporate library services to the blind in the UNESCO Public Library Manifesto.

UNESCO has suggested a new project to the Round Table: braille production of children's literature in Africa.

All libraries, not only those in developing countries, can cut costs and expand their collections through international sharing of materials, but a number of obstacles must be overcome.

In the first place, each library must know what is available and where. Schauder and Cram found ''no way of checking the holdings of foreign countries other than by obtaining their printed catalogues,'' but there was ''no reliable directory of libraries for the blind'' to assist them.[2] The Round Table is compiling a directory of braille and recorded book libraries and production facilities which will provide information about the location and administration of 500 libraries, the formats of materials they produce and hold, the language in which they produce materials, the materials they make available through international interlibrary loan, and the catalogs they publish. The directory is funded by UNESCO and the American Foundation for the Blind. The Round Table plans to establish an information center to receive and distribute updated information.

Insofar as catalogs are concerned, the Round Table has embarked on a long-term project—bibliographic control. The delegates of each of the countries represented on the Round Table are charged with selecting a bibliographic center for special-format materials. Each national center will build a national union catalog containing both existing and new materials for handicapped individuals. Catalogs will provide the data needed to identify and select books and will be arranged to facilitate searching. These national union catalogs will serve not only the usual purpose of locating desired material but also the unique function of allowing producers, ultimately throughout the world, to ascertain whether a requested book is already available in special format, thereby avoiding duplication and freeing resources for another book.

The Round Table is also developing an international standard for individual bibliographic records such as catalog cards. Standardization will allow each country's catalogs and bibliographic data to be readily understood in other countries; it will also reduce cataloging costs since libraries will acquire the bibliographic record along with the special-format item. International standards for media of exchange such as national bibliographies or machine-readable records are also being developed. Each country will determine the best method of publishing its catalog and explore ways of making it available to other countries.

Australia has begun publishing its national union catalog quarterly as a machine-held file with computer-produced fiche output, which permits wide distribution. The catalog is cumulative and is expected to grow at a rate of one thousand titles per month.

The United States is in the process of creating a national union catalog by gradually expanding its quarterly computer-produced microfiche catalog of items mass-produced by the Library of Congress since the early 1960s to include materials from all sources in the country.

The Round Table's ultimate goal is a single universally intelligible, widely distributed global union catalog which would enable any librarian in any library to locate special-format materials for handicapped readers.

But such a catalog will be useless unless readers in one country can use materials from another. That means formats must be standardized. With traditional production costs rising and the opportunity for standardization presented by new technology, it is vital that we not repeat the mistakes of the past with regard to parochialism and the diversity of formats now in existence. Louis Braille published his code in the 1830s. It took about 100 years for the English-speaking countries to decide braille was the best embossing system and to agree on a single uniform braille code. A uniform code for Spanish was not adopted until 1951.

While braille is the generally accepted tactile representation of print, the debate continues over contractions, that is, abbreviations for frequently occurring combinations of letters and words. Most countries employ them. Some, most notably the Netherlands, have decided to produce materials only in uncontracted braille. Most German computer-produced braille texts are only slightly contracted, while hand-transcribed and press braille materials are quite extensively contracted. Of course, the letter combinations which recur frequently vary from language to language and so do the braille symbols representing them. The international sharing of contracted braille is technically possible, but relatively few braille readers learn the contraction codes of more than one language. Uncontracted braille would facilitate international sharing of materials; however, contraction reduces the cost and size of braille books and increases the speed at which they can be transcribed and read, both important considerations. International cooperation in the application of modern technologies may eventually eliminate the controversy over the relative merits of contracted and uncontracted braille.

In the Danish semiautomated braille production system, for example, a keypunch operator can in three days enter a 250-page print book, equivalent to about 450-500 interpointed braille sheets. The computer can translate the book into braille in about two minutes and a line printer can braille a single copy of 400 sheets in only twenty to thirty minutes. Moreover, the Danish system provides the option of supplying uncontracted, grade 1½, or grade 2 braille on request. The translation is controlled by a dictionary containing the rules for translation into the desired grade of braille rather than by the translation program itself. Therefore, by using a different dictionary, the same program can be used to translate the text into either uncontracted or contracted braille. (For that matter, given an appropriate dictionary, it could translate the Danish text into English braille.) The Round Table goal is the incorporation of this refinement into all existing and future computerized systems in order to facilitate the international exchange of material by offering readers a choice of contracted or uncontracted braille. It also encourages the exchange of tapes rather than hard copy when braille is produced by computers.

Using compositor tapes created to set type for print books as input for braille production eliminates keyboarding from the print copy and the resulting delay in production, a pernicious situation for students, working people, and others who need timely materials. In fact, it may be technically feasible for the print and braille editions of a new work to appear simultaneously. In the last few years the print industry has been using compositor tapes at a rapidly increasing rate. Such tapes contain all the words and punctuation in the text and, if machine-readable, can provide input to a computer for translation to braille, keeping human intervention to a minimum. Denmark, the Netherlands, Norway, the United Kingdom, and the United States have conducted successful trials. Sweden is increasing its braille output by using compositor tapes.

One problem with using compositor tapes is that special codes needed for producing the print book—instructions for type face and page layout, for example—must be deleted. Unfortunately, composition codes within the print industry vary considerably and therefore a special preprocessor to delete instructions may be needed for each printer. Some sort of international clearinghouse for preprocessors may be needed, since it is unlikely the print industry will agree on a single code.

However, this problem must be weighed against the possible advantages of using compositor tapes. Nationally, libraries would enjoy faster production of more timely titles with greater flexibility of format and at reduced cost. Internationally, interlibrary loan would be facilitated. For example, when a requested book that was mass-produced using zinc plates is not immediately available, either the patron must wait for a copy or the borrowing library must transcribe the work again because it is too expensive to set up the press for a single copy. Computerized braille production would allow the economical production of a single copy on the line printer as needed.

With regard to paperless or cassette braille, at present the technical specifications of the various reading machines determine the arrangement on the tape of the digital signals that activate the pins forming the braille cells. The resulting diversity of arrangements, like the various composition codes in the print industry, reduces the possibilities of sharing materials internationally. The Round Table is working toward standardized cassettes.

These technological advances in braille production, still in various stages of experimentation and development, if left to repeat the history of the braille code, can create even more and greater barriers to the international sharing of resources than already exist. Clearly, it is imperative that the new technology be brought under the auspices of an international library and materials production organization to assure it becomes a unifying force through the greatest degree of standardization at the most critical points. The Round Table has, therefore, established a technology committee and proposes to work with the electronics industry to develop compatible products. The committee coordinates its activities with parallel committees of the WCWB. It also disseminates information about braille production. A review of braille technology by Paulli Thomsen, a Round Table member representing Denmark, has been published in the *Journal of Visual Impairment and Blindness*.[3]

The diversity of recorded formats does not per se preclude the international sharing of materials, but it does complicate it inasmuch as libraries must have playback devices for the various formats. The United States has established formal international interlibrary loan relations with fifteen to twenty countries that may borrow NLS materials but must purchase equipment. Other libraries may not duplicate NLS international interlibrary loan materials; ownership remains with NLS. However, if their equipment is compatible, libraries in other countries sometimes buy NLS material directly from the nonprofit producer. Or, if their equipment is not compatible, NLS sometimes provides a submaster and the acquiring library duplicates it in another format after receiving permission from the copyright holder.

The Round Table has established a subcommittee to identify audio needs, review proposed equipment, and stay abreast of the state of the art of recorded formats. Areas of particular concern are talking-book standards and formats, indexing systems, and the postcassette era. The Round Table takes the position that recorded formats should be determined solely by convenience to the user and cost effectiveness. It has requested that the Library of Congress permit use of its cassette-book machine in other countries— a request which was granted with the legally required stipulation that the machine be used only by blind and physically handicapped persons. About nineteen countries have purchased NLS machines. The Round Table's goals include a reduction in the number of formats and eventually an international standardization of formats—reel, disc, or cassette; speed and track configuration—and of master-tape recording practices.

Speed and track configurations requiring special playback equipment create a closed system, one with controlled access limited to eligible persons. Braille is by nature a closed system. A closed system for recorded materials protects the copyright owner's rights. The two rights which must be balanced with regard to copyright are illustrated by the United Nations Universal Declaration of Human Rights, which states that ''everyone has the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author'' and ''everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and share in scientific advancement and its benefits.''[4] Copyright law must protect the personal and property rights of authors in their creation, their exclusive right to control its reproduction, publication, and performance, for the licensing of which authors are entitled to receive payment. On the other hand, copyright law must promote the social needs of the community, including serving the public interest by making products of the intellect accessible to all. Insofar as blind and physically handicapped readers are concerned, the special formats they require derogate from their rights as consumers of library books.

Very few national copyright laws make special provisions facilitating the production of special-format materials for handicapped readers; those that do, make more generous provisions for braille materials. Such special provisions achieve a socially desirable objective—providing access to published materials to those who cannot use conventional print because of a physical handicap—by derogating from the rights of the copyright holder. In countries which do not legislate such special provisions, domestic law requires that permission be obtained for each title and each format.

Libraries tend to request narrow permissions, according to their organization, function, and legal restrictions. One may ask permission to make a master and a single free duplicate for a student, while another seeks permission to produce a work in special format for sale to individuals or to libraries within a specific geographical area. By making requests as specific as possible, an agency increases its chances of receiving an unconditional affirmative response.

Although the production of materials for handicapped readers is an anomaly in the publishing industry, copyright owners and the producers themselves have treated special-format works in the same way as print books, for which distribution rights are divided geographically. Thus, specific permission or the law itself may preclude the exchange, duplication, or sale of special-format materials outside a limited jurisdiction. Agencies that wish to acquire for their own collections special-format materials produced in another country generally seek the broader permission themselves. In one case, however, the Library of Congress, in response to inquires from abroad, obtained permission from American magazine publishers to offer, on a selective basis, subscriptions to periodicals it produces in special format to foreign libraries and organizations serving the reading needs of blind and physically handicapped people.

Clearly, in many countries and internationally, copyright is one reason for the insufficiency of materials for the handicapped reader, as it can delay, encumber, restrict, or prevent the production and dissemination of special-format materials. The WCWB concluded in 1976 that exemption from international copyright conventions, which are multinational agreements on copyright, for the transcription of material in embossed, recorded, and large-type formats for handicapped readers was crucial and began the slow process required to effect change. The Round Table supports the WCWB's effort and pursues other avenues as well.

It is sponsoring a study to identify specific copyright problems, recommend national and international solutions, and provide the basis for Round Table policy. The situation is a complex one. At the national level a domestic law reflects a more or less homogeneous philosophy; at the international level, not only heterogeneous philosophies but disparate legal systems must be accommodated. The day when the original transcription of a work into special format for handicapped readers is universally recognized as a world resource will be long in coming. In the meantime, more favorable domestic legislation will be achieved in many nations.

The Round Table is gathering data on how long it takes to transport special-format library materials as postage-free surface mail, how much damage occurs to them in transport, and how often they are lost in international mails. This information will be used in a study of alternate means of transmission, including airmail. The Round Table is working with national library associations to encourage international air transport associations to extend stand-by air rates, which at present are available only on flights with little cargo. It is also developing standard labels identifying special materials for handicapped individuals in order to secure their easy acceptance as postage-free mail and their easy passage through customs.

Like copyright laws, postal laws and customs regulations tend to be more liberal for braille materials. The Round Table is attempting to extend the list of postage-free articles to include materials designed for other physically handicapped persons besides those who are blind: large-print materials (books, periodicals, catalogs, and other materials describing collections), phonographs, cassette players, parts for the repair of these machines, and other reading equipment specially designed for handicapped people.

An inevitable and fruitful concomitant of the Round Table's other activities is the systematic exchange of information about production, library services, and handicapping conditions. As part of this systematic exchange of information, I, as executive secretary of the Round Table, collect information of international interest and distribute it to about 250 libraries and other interested organizations twice a month.

In addition to publications already mentioned, the Round Table is involved in other publishing endeavors. It is preparing an international biobibliographical directory of blind persons in science and cultural affairs, a project suggested by D. S. Zharkov, director of the Republican Central Library for the Blind, Moscow. Round Table delegates from Canada, France, Norway, and the United States wrote essays on formats, copyright, international relations, postal regulations and customs law, and bibliographic control for *Library Service for the Blind and Physically Handicapped: An International Approach*, published in 1979.[5] "International Co-ordination of Library Services for Blind and Physically Handicapped Individuals: An Overview of IFLA Activities" appeared in a UNESCO journal in the fall of 1979.[6]

Further, the Round Table has developed close working relationships and exchanged valuable information with a number of national and international organizations.

The benefits accruing to the Library of Congress and other libraries for handicapped readers from international cooperation are many but at present modest. They will only increase in time. Through sharing materials we have expanded our national collections and improved our foreign-language collections. We have learned about new service systems and production technology, which we can review, evaluate, and possibly implement. We have achieved some economies. We have begun national union catalogs and are exchanging them. In addition, we have enjoyed the social benefits derived from the creation or expansion of services in developing countries. Perhaps most important, we have begun to exercise a significant influence on the development of the technology we must use and on the international conditions under which we must work. The effect has been synergistic and the ultimate beneficiaries are handicapped readers everywhere.

NOTES

1. Donald E. Schauder and Malcolm D. Cram, *Libraries for the Blind: An International Study of Policies and Practices* (Stevenage, England: Peter Peregrinus, 1977), p. 102.
2. Ibid., p. 62.
3. Paulli Thomsen, "Braille Production Formats That Will Counteract Rising Costs," *Journal of Visual Impairment and Blindness* 74:158–161 (April 1980).
4. United Nations, General Assembly, "Universal Declaration of Human Rights," Commission on Human Rights, Economic and Social Council (New York, 1949), Article 27, paragraphs 1 and 2.
5. Frank Kurt Cylke, ed., *Library Service for the Blind and Physically Handicapped: An International Approach* (Munich: K. G. Saur, 1979).
6. Frank Kurt Cylke, "International Co-ordination of Library Services for Blind and Physically Handicapped Individuals: An Overview of IFLA Activities," *Unesco Journal of Information Science, Librarianship, and Archives Administration* 1:242–248 (October–December 1979).

Appendix

Free Matter: Nearly a Century of Change

Judith M. Dixon and Alfred D. Hagle

The legislation allowing blind and handicapped persons to mail certain materials as "Free Matter for the Blind and Handicapped" is well known to us all. What is not so well known, however, is the fact that this legislation has had a long and varied history. From its beginnings in 1899, until the most recent changes in 1970, there have been at least fourteen significant additions, deletions, or revisions to the original law. Through the years, these changes have gradually liberalized provisions of the law to allow more kinds of material and equipment to be mailed, more groups of persons to enjoy these mailing privileges, and greater reductions in cost.

On March 2, 1899, "an act regulating the postage on letters written by the blind" was passed by Congress. This piece of legislation was the first such postal law benefiting blind persons in the United States, although Canada had begun free mailing for its blind citizens the previous year. The United States law allowed blind persons to mail unsealed letters in raised characters at third-class rather than first-class rates.

In 1904, books, pamphlets, and other reading matter in raised characters could be mailed on "loan" by public institutions for the blind, public libraries, and blind readers (returning material to these institutions). These were the first materials to go completely free of charge. Certain weight limits, however, were imposed. Single volumes could weigh no more than ten pounds and packages could weigh no more than four pounds. The word *loan* had the effect of precluding publishers of embossed materials from taking advantage of free mail-

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ing. Even at this early date, the prohibition on the presence of advertising was specifically mentioned in the law.

Eight years later, publishers of magazines, periodicals, and regularly issued publications in raised characters were added to the list of those who could mail materials free, with the condition that no subscription fee could be charged. Publishers were required to file a written application in order to comply with the provisions of the free mail law.

In 1924, organizations, institutions, and associations for the blind, not conducted for private profit, were added to the list of those who could mail material free. These, and previously mentioned organizations, were permitted to mail "holy scriptures or part thereof" free of charge. However, if material was "furnished" to recipients at cost, the charge for mailing was one cent per pound. This was the first time the word *furnished* appeared instead of *loan*, permitting a reduced charge for mailing scripture materials that were to be sold (at cost) to the recipient. The word *loan* was retained with respect to all other kinds of reading material.

The 1904 act was amended again in 1934 to add "sound reproduction records" to the kinds of materials which could be mailed free. The weight limit on each container was twelve pounds.

In 1937, nonprofit organizations, institutions, and associations were permitted to charge a subscription fee for their periodicals. Periodicals could be mailed for one cent per pound if furnished to a blind person at cost.

The next year, federal or state agencies, public libraries, nonprofit organizations or associations for the blind, and blind persons (sending items for repair) were permitted to mail "reproducers for sound reproduction records" at a cost of one cent per pound. The equipment had to be owned by a government, library, or other institution. An organization had to submit satisfactory proof to the Post Office that it was a repair facility. The weight limit on books was increased to fifteen pounds, allowing twenty records to be mailed in a single container instead of the eighteen which could be mailed at the twelve-pound limit.

In 1941, braille writers and other appliances were added to the list of materials that could be mailed at a cost of one cent per pound, by these same groups, provided they were sent to or returned from repair. Fourth-class weight limits were applied. Eight years later, the condition of "repair" was removed from the mailing of braille writers. Braille writers could now be mailed at a cost of one cent per pound at the time of purchase.

In 1952, the limitation on weight and size of sound reproducers, other appliances, and their parts was increased to a total of seventy pounds and one hundred inches in length and girth combined.

According to a notice published in the *Federal Register* in 1954, a maximum of fifteen pounds six ounces of raised printed matter for the blind could be mailed free in international mail, by surface mail only, to all countries except Argentina, Brazil, Spain and its possessions, and the Philippines. It is interesting to note that two years earlier, in 1952, exemption from postal charges for "impressions in relief for the blind" was adopted by the Brussels Congress of the Universal Postal Union (UPU), of which the United States is a member. Embossed letters between blind persons could not travel free internationally; this exemption had to await the approval of the next Congress of the UPU in Ottawa in 1957. Subsequent international postal treaties allowed free mail to go to all countries.

In 1958, the limitations on who may mail "books or pages thereof" were removed, allowing "any person" to mail these materials free of charge. This change permitted volunteers and others to mail books and parts of books free of charge, provided the materials were being sent to blind persons at no cost to the blind person.

In 1962, nonprofit libraries, schools, publishers, and organizations and associations for and of the blind were allowed to mail material in "sight-saving type (fourteen point or larger)." Braille writers and other appliances were permitted to be mailed free, as well as paper, tape, and other materials for the production of reading matter, as long as this material remained the property of state governments, public libraries, nonprofit organizations, or blind individuals. Material that was to be sold to blind persons at cost was still subject to a mailing charge of one cent per pound. This was the first time the law contained the words *of the blind,* thus allowing organizations of blind persons to mail their publications, newsletters, etc., without charge. In this law, the phrase *sound recordings* was substituted for *sound reproduction* *record,* all references to "holy scriptures" were eliminated, and the phrase *blind persons* was substituted for "the blind."

Five years later, physically handicapped persons were added to the list of those who may mail materials free. All requirements that material be the property of governments, libraries, etc., were eliminated. The list of materials that can be mailed free was expanded to include the following: typewriters; educational or other materials; devices that were especially designed or adapted for blind or handicapped people; and musical scores. With the passage of this 1967 law, for the first time, blind persons were permitted to mail unsealed letters in braille, large type, or recorded form without cost. "Free Matter for the Blind and Handicapped" was specified as the only indicia to be used. The requirement for publishers to apply for reduced rates was eliminated.

In 1970, P.L. 91-375 amended the previous law by deleting the phrase *prescribed by the Postmaster General* in reference to weight and size restrictions. Since that time, weight and size limitations have remained constant at the levels set in 1952.

Sections 3403-3405 of Title 39 of the *United States Code* (1976) which is the law that stands today, are as follows:

§ 3403. Matter for blind and other handicapped persons

(a) The matter described in subsection (b) of this section (other than matter mailed under section 3404 of this title) may be mailed free of postage, if—
  (1) the matter is for the use of the blind or other persons who cannot use or read conventionally printed material because of a physical impairment and who are certified by competent authority as unable to read normal reading material in accordance with the provisions of sections 135a and 135b of title 2;
  (2) no charge, or rental, subscription, or other fee, is required for such matter or a charge, or rental, subscription, or other fee is required for such matter not in excess of the cost thereof;
  (3) the matter may be opened by the Postal Service for inspection; and
  (4) the matter contains no advertising.

(b) The free mailing privilege provided by subsection (a) of this section is extended to—
  (1) reading matter and musical scores;
  (2) sound reproductions;
  (3) paper, records, tapes, and other material for the production of reading matter, musical scores, or sound reproductions;
  (4) reproducers or parts thereof, for sound reproductions; and
  (5) braille writers, typewriters, educational or other materials or devices, or

parts thereof, used for writing by, or specifically designed or adapted for use of, a blind person or a person having a physical impairment as described in subsection (a)(1) of this section.

§3404. Unsealed letters sent by blind or physically handicapped persons
Unsealed letters sent by a blind person or a person having a physical impairment, as described in section 3403(a)(1) of this title, in raised characters or sightsaving type, or in the form of sound recordings, may be mailed free of postage.

§3405. Markings
All matter relating to blind or other handicapped persons mailed under section 3403 or 3404 of this title, shall bear the words "Free Matter for the Blind or Handicapped", or words to that effect specified by the Postal Service, in the upper right-hand corner of the address area.

Specific regulations which interpret this law to the postmasters around the nation are contained in the *Domestic Postal Manual*, Part 135.

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